SFI Media Futures

Annual Report 2024

Norwegian Centre for Research-based Innovation

Media Futures

Partners

Host

Universitas Bergensis

Funded By

The Research Council of Norway

Media Futures

@2025

GREETINGS FROM THE CENTRE DIRECTOR

Time flies. 2024 marks the midpoint of SFI MediaFutures' journey. In just four years, our Research Centre has achieved remarkable milestones. Launched digitally in 2020 amid the constraints of the COVID-19 pandemic, we nevertheless quickly got projects off the ground, establishing five dedicated work packages. Each focuses on key research areas, including media experiences and personalization, recommender technology, AI-driven content production and analysis tools, new forms of media interaction and accessibility, and Norwegian language technology.

From the start, we have focused on building strong collaborative networks, bringing together industry experts, academics from Norway, and high-profile international research partners. Together, we have tackled global challenges through advanced research in responsible AI and media technology innovation. The years 2021 and 2022 were marked by expanding our team, moving into our office spaces at MediaCity Bergen, and welcoming PhD students and PostDocs, whose projects have been at the heart of our research-driven innovation. Since then, we have developed verification tools for fact-checkers and productivity tools for editors, built interactive platforms for new media experiences and engagement, studied media consumption behaviors, and enhanced video stream recommendation systems. Also, we have extensively annotated data to support the launch of national language models, always placing user-centered innovation at the core of our mission.

The rapid advancement of generative AI shaped 2023, with large language models like ChatGPT and Gemini dominating public discourse. However, these developments also intensified societal challenges—deepfakes, cheap fakes, AI-driven disinformation campaigns, and fraudulent applications raised global concerns. In response, we decided to ramp up our efforts to develop technological solutions to counter these threats. Through close collaborations with fact-checking and content verification organizations such as Faktisk.no and Factiverse, as well as our involvement in the international Project Reynir, we gained valuable insights into the role of C2PA in combating misinformation and the potential of AI for real-time fact-checking during political debates. These initiatives aim to empower editors navigating the global misinformation landscape while contributing to a safer, more responsible media ecosystem.

Reflecting on 2024, one of the standout moments was our Annual Meeting in November, where over 130 national and international participants came together. The event centered on trust and the usability of generative AI, featuring inspiring keynotes on responsible AI innovation from industry leaders such as Amazon and Dataminr. It also included thought-provoking presentations from the BBC and Nokia Bell Labs, along with an interdisciplinary panel debate on tackling disinformation with AI technology.

Another major achievement in 2024 was our successful completion of the NFR Midway Evaluation, a comprehensive assessment of our SFI Research Centre conducted by an international committee appointed by the Research Council of Norway. This evaluation, which extended into the Spring of 2025, required us to provide a detailed report on our four years of research and innovation outcomes. While the process was demanding and required the full attention of our team, the results were well worth it — our work received an extremely positive and encouraging assessment, further affirming the significant impact and progress we have made at MediaFutures.

As we move forward, we remain deeply committed to the core values of MediaFutures. We believe in collaboration and openness, impactful research, diversity and inclusion, integrity, and a shared curiosity that drives innovation — all aimed at shaping the future of responsible media technology. Guided by these principles, our team will stay focused over the next four years, striving for academic excellence and pushing forward with media AI innovations to empower editors and protect democracy in the digital public sphere—always in close partnership with our industry collaborators. We are confident that MediaFutures is well-positioned to seize new opportunities and has a bright future ahead, even beyond the original eight-year timeline.

Prof. Dr. Christoph Trattner

CONTENT

CENTRE ORGANISATION

STEERING BOARD

Christian Birkeland
Chair, TV 2

Jan Erik Askildsen
until Nov 24
UiB

Siri Gloppen
Nov 24 - now
UiB

Turid Borgen
until Aug 24
UiS

Øystein Lund Bø
Aug 24 - now
UiS

Igor Pipkin
until Aug 24
Amedia

Erik Bonesvoll
Aug 24 - now
Amedia

Jan Stian Vold
BT

Morten Langfeldt Dahlback
Faktisk.no

Nabil Belbachir
NORCE

Pål Nedregotten
NRK

Sergej Stoppel
Wolftech

Hege Stensrud Høsøien
National Library

Torbjørn Bøen
Vizrt

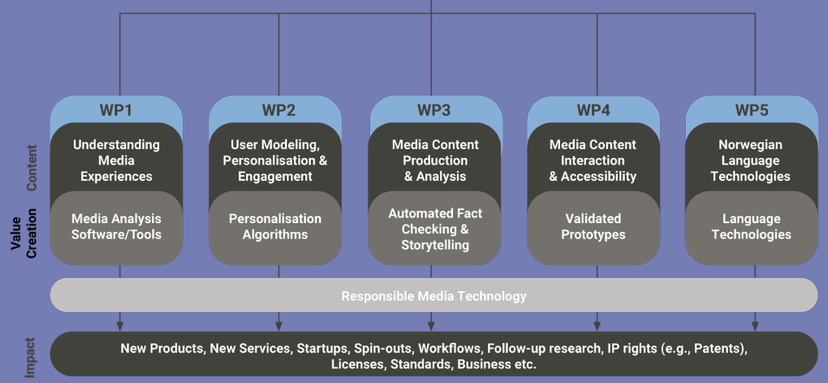
Juan Carlos Lopez Calvet
Schibsted Media

Stephan Oepen
UiO

Centre Director
Trattner (UiB)

Centre Administration
Admin Coordinator, Financial Officer, Communication Officer, Innovation Coordinator, Etc.

International Advisory Committee



WORK PACKAGES

Work Package 1: Understanding Media Experiences

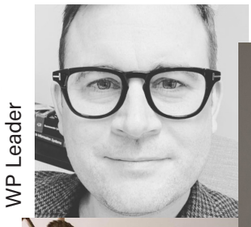
WP1 is concerned about how we humans experience media and researches its effects on different areas of life such as democracy, society and technology.

In 2024, the members of this work package focused on the use of mobile phones amongst the youth, the political perspective of media in relation to global elections and trust in media and technology.

Assoc. Prof. Erik Knudsen
WP Leader

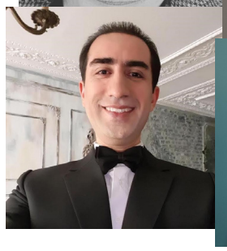
Kristian Tolonen
Industry WP Leader

Work Package 2: User Modeling, Personalization & Engagement



Prof. Christoph Trattner
WP Leader

Lars Skjærven
Industry WP Leader



Prof. Mehdi Elahi
WP Leader

Astrid Tessem
Industry WP Leader

This Work Package focuses on responsible recommender systems that enhance media experiences while ensuring transparency, fairness and diversity. It aims to mitigate issues like filter bubbles and echo chambers while addressing biases to improve existing models and tools.

Trust and persuasion were topics WP2 was working on in 2024, together with industry partners BT, TV 2, Amedia and Schibsted (Media).

Work Package 3: Media Content Production & Analysis

This WP utilises language processing, knowledge graphs, and machine learning to analyse multimodal media content about quality and validity. It focuses on detecting manipulation in images, videos and text and developing computational tools to support creative content production.

In 2024, they had a specific focus on fact-checking, deepfake detection, and working together with Wolftech, Faktisk.no and TV 2.

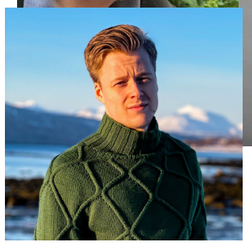
PhD candidate Sohail Khan submitted his thesis in December and will defend it in 2025. The WP also welcomed the new PhD candidate Peter Røysland Aarnes and the Postdoctoral Researcher Adane Tarekegn.

Prof. Bjørnar Tessem
WP Leader

Assoc. Prof. Fazle Rabbi
WP Leader

Pablo Antonio Vidales
WP Industry Leader

Prof. Morten Fjeld
WP Leader



Kristoffer Tangrand
WP Leader

Pablo Antonio Vidales
Industry Leader

Work Package 4: Media Content Interaction & Accessibility

This WP works on sensor technology (instrumentation), AI and personal devices (interactivity) to increase engagement and collaboration. The conducted research covers the topics of responsive UIs, adaptive streaming, content adaptation and multi-device adaptation.

In 2024, they collaborated on how to improve interfaces in various ways together with TV 2 Skole, Vizrt, NORCE, Wolftech, BT and Amedia.

Work Package 5: Norwegian Language Technologies

Language technologies are at the core of the Work Package, as it aims to provide datasets and models for Norwegian (Bokmål/Nynorsk) that support automated understanding as well as automated production of media texts in this language.

In 2024, the Work Package made considerable progress in developing Norwegian large language models (LLMs), benchmarking and event extraction systems. MediaFutures Professor Lilja Øvrelid and Professor Erik Velldal released, in collaboration with other partners, several Norwegian LLMs, openly available and trained on open data. In a collaboration with the National Library and NTNU, they worked on assessing the value of copyrighted material in the training of LLMs, making use of the large text corpus previously collected from MediaFutures partners in the context of WP5. Furthermore, Associate Professor Samia Touileb led the work that resulted in a new LLM benchmark for Norwegian news summarization. In October, WP5 was joined by the new PhD candidate, Jiajing Wan.

Prof. Lilja Øvrelid
WP Leader

Lubos Steskal
Industry Leader

Assoc. Prof.
Samia Touileb
WP Leader

OUR VALUES

Collaboration & Openness	Commitment to Impact	Diversity and Inclusion	Integrity and Responsibility	Curiosity and Innovation
A strong spirit of working together and sharing insights across disciplines	Dedication to impactful research benefiting both the academic and media sectors	Recognition of varied backgrounds and perspectives	Upholding ethical practices and accountability	A shared interest in exploring new ideas and pushing boundaries

OUR VISION

Technological innovation has significantly transformed the media industry in the past two decades, creating both opportunities and challenges. We at MediaFutures keep an eye on these dynamics by investing largely in research in responsible media technology.

We focus on identifying research gaps, improving existing technologies, and ensuring responsible editorial practices. Through our dedicated efforts, we aspire to make a significant impact on society and shape a media industry that is resilient and adaptive to the needs of the future.

At MediaFutures, responsible media technology represents our commitment to maximising benefits for both news organisations and society while minimising potential negative impacts. Acknowledging the pivotal role of artificial intelligence technologies and machine learning in shaping the media's future, our primary focus centres on comprehending their influence on the industry and society. MediaFutures' mission is to spearhead responsible media technology that not only responds to current challenges but also shapes the future of the media landscape.

MediaFutures Overall Vision Paper

User Modelling, Personalization & Engagement: Vision Paper

Media Content, Production and Analysis: Vision Paper

Leveraging Professional Ethics for Responsible AI: Vision Paper

Centre Management & Administration

The administration consists of the Centre Leader, the Administration Coordinator, Finance Officer, Innovation Coordinator, Communication Officer and Research Assistants. The group is responsible for running the centre.

SUCCESSFUL NFR MIDWAY EVALUATION

ASSESSMENT OF OUR SFI AFTER A 4 YEAR JOURNEY

SFI MediaFutures started on October 1, 2020, and had its official opening ceremony on February 2, 2021. Over four years, the Research Centre has grown alongside the rapid development of AI and media technology, expanding its efforts to analyse the use and creation of media technology while generating value for the media industry. In the summer of 2024, it was time for the formal midway evaluation by its main funder, the Research Council of Norway (RCN).

The purpose of this evaluation was to assess whether we have fulfilled our plans, vision, and promises and if we will continue as a Research Centre for the full eight-year period of an SFI. The evaluation took place from summer 2024 to spring 2025.

The results

On March 18, we received the Portfolio Board's decision confirming that we will continue as a centre for research-driven innovation through October 2028. The committee's report delivered excellent news and strong encouragement for our work.

In their assessment, the committee stated: *"The SFI MediaFutures is a very strong centre on an important theme. It has a competitive advantage from having started on AI in time. The centre has been successful in collaborating with the (local) media industry in a strong consortium, which brings benefits to both. It has succeeded in educating researchers of the future, with experience in connecting industrial and academic agendas. It has developed into a leading centre, definitively in Norway, but also internationally in the field of AI, media and journalism. The committee is impressed by the achievements!"*

Recommendations for the future

The committee sees three major opportunities for deepening and strengthening our work:

First, the centre could invest more in connecting the trajectories of the five WPs and think about the accumulation and cross-fertilization of insights. This includes a more critical approach on the ambivalent roles of media in a democratic society.

Second, the centre is in a position to gain more international visibility, drawing from the Norwegian experiences. It could then also secure more additional funding.

Third, the centre together with the university should design a development path for the centre after its eight year period of RCN funding. The centre has proven to bring added value to the university. The University of Bergen is in a unique position to design a strategy to continue the consortium and continue locally embedded research on an increasingly important theme, in Norway and elsewhere.

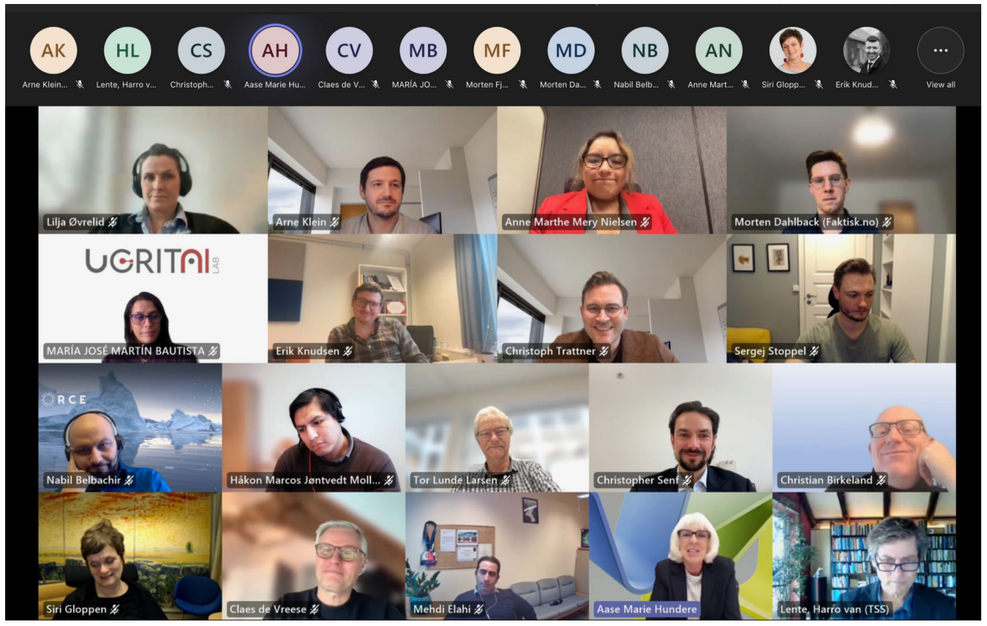
The process

The process began with a visit to the SFI forum in Oslo on May 29, 2024, where Centre Leader Professor Christoph Trattner and Administrative Coordinator Anne Nielsen learned more about the evaluation requirements.

During the summer and early autumn, we gathered extensive information about our vision, organisation, publications, innovation outputs, and cooperation, compiling these documents for the RCN evaluation committee.

In phase two, on January 23, the committee conducted interviews with us about our research achievements, innovation and value creation, internationalisation, education, recruitment, mobility, organization, collaboration, and plans for the next three years. They also interviewed some of our PhD candidates.

As the Centre's Director, Prof. Christoph Trattner expressed gratitude to every MediaFutures employee for their dedication and hard work that led to this positive evaluation.



SFI assessment interview with the NFR external expert committee, January 23 2025

SOFT KPIS

1 GRANT & SPIN-OFF

3 STARTUP INITIATIVES

12 DATA SETS & CODE REPOS

HARD KPIS

34 PEER REVIEWED JOURNAL/CONFERENCE/ WORKSHOP PAPERS

7 DEMOS & PROTOTYPES

6 DIGITAL SERVICE INNOVATIONS

275 MILLION NOK TOTAL BUDGET

5
Work Packages

13
Industry Partners

MEDIAFUTURES IN NUMBERS

12 INTERNATIONAL PARTNERS IN 6 COUNTRIES

CORNELL UNIVERSITY, NEW YORK, USA

MIT, CAMBRIDGE, USA

NORTHWESTERN UNIVERSITY, CHICAGO, USA

THE NEW SCHOOL, NEW YORK, USA

UNIVERSITÄT KLAGENFURT, AUSTRIA

STOCKHOLMS UNIVERSITET, SWEDEN

VRIJE UNIVERSITEIT AMSTERDAM, NETHERLANDS

UNIVERSITY OF AMSTERDAM, NETHERLANDS

YALE UNIVERSITY, USA

OPEN UNIVERSITY, GREAT BRITAIN

ROYAL HOLLOWAY, UNIVERSITY OF LONDON, GREAT BRITAIN

THE EUROPEAN BROADCASTING UNION, SWITZERLAND

43
Events

3
Secondments

4
International researchers

6
New employees

28
Master theses under the thematic areas of the centre

INNOVATION

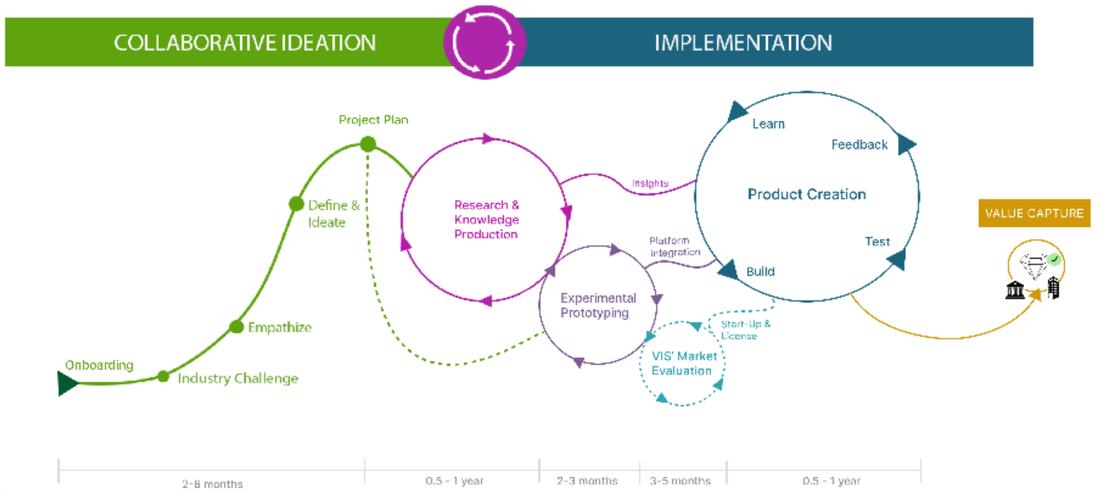
DYNAMIC & USER-CENTRED INNOVATION MODEL

"...we start with collaboratively identifying industry challenges and developing research projects with partners..."

At MediaFutures, innovation is at the core of everything we do. Many people think of innovation as just a technological output. While that is not entirely wrong, it is only the result of a broader process. At its core, innovation means renewal or change. In that sense, innovation is about how organisations develop new solutions to address both existing and emerging challenges across various fields, including societal issues such as mis- and disinformation. The key lies in structuring how these solutions are created.

As a research-based innovation centre (SFI), we are dedicated to driving substantial value creation in the Norwegian news and media-tech industry. Our partners include prominent broadcasters like NRK and TV 2, leading media companies such as Bergens Tidende, Wolftech, and Amedia, as well as media giants like Schibsted. Through advanced research in responsible AI-enabled media tech, we aim to empower our partners to excel in a competitive global industry and tackle societal challenges such as fake news, echo chambers, and political polarisation. We strive to enhance media trust, access new markets for verified news, and boost the export of Norwegian media services and products.

To stay at the forefront and effectively transform research outcomes into new digital tools, analytical methods, or content types for the future of media, our Centre has developed a robust framework and structured process for how we drive innovation. MediaFutures' ***Dynamic & User-centred Innovation Model*** aims at facilitating long-term, strategic collaboration with industry partners and supports the identification, mapping, and monitoring of research outcomes with innovation potential. This model unfolds in three key phases, as visualized in the following figure:



Phase 1: Detection and Ideation
Our model is user-centred, as we start with collaboratively identifying industry challenges and developing research projects with industry partners, ideally through secondments or internships of our researchers.

Phase 2: Iterative Research and Development
This phase focuses on refining research and development to tackle identified challenges, allowing for continuous adjustments based on partner feedback and new insights to ensure solutions remain relevant and effective—in that sense, our model is dynamic.

Phase 3: Prototyping and Solution Implementation Proposing and testing solutions through prototypes aimed at implementation within industry partners' digital platforms, product pipelines, or fostering the creation of new research-based enterprises.

In a nutshell, this framework views innovation as collaborative, experimental problem-solving embedded in productive work packages and facilitated by supportive leadership, ensuring the impactful deployment of research outcomes. Notably, PhD and postdoctoral researchers dedicate a substantial part of their time collaborating directly with industry partners, fostering deeper engagement and knowledge exchange. This structured interaction ensures that the Centre's research aligns with industry needs and translates into practical solutions.

INNOVATION OUTCOMES

But what are the outcomes of this dynamic, user-centred Innovation Model? MediaFutures measures its innovation results against the following Key Performance Indicators (KPIs):

Demos & Prototypes: Presentations that showcase the functionality and features of developed innovations, along with initial versions of new products or services that demonstrate their feasibility and functionality (e.g., p. 17-22, 24, 31).

Digital Service Innovation: Advancements in digital services, such as algorithmic recommender systems, aimed at improving user experience, user engagement, or operational efficiency (e.g., p. 29).

Data Set & Code Repositories: Curated collections of datasets and code that advance research and innovation in media technology (e.g., p. 23).

Grant & Spin-Off Initiatives: Initiatives focused on securing funding and fostering new ventures based on research outcomes (e.g., p. 16).

These KPIs provide a comprehensive framework for evaluating and enhancing MediaFutures' innovation impact and strategic outcomes. To ensure the success of the Centre's innovation model, MediaFutures' Innovation Coordinator, Dr. Christopher Senf is responsible for tracking and assessing the Centre's innovation results. MediaFutures currently excels in generating innovation results, particularly in prototypes, demos, digital service innovation, datasets, start-ups, and spin-off initiatives.

Looking ahead, MediaFutures is dedicated to further strengthening its organisational framework and advancing innovation in Media AI to empower editors as well as safeguard democracy in the digital public sphere. Through the structured efforts outlined above, MediaFutures is well-positioned to navigate challenges, seize opportunities, and maintain its leadership in media technology innovation. We maintain our dedication to academic excellence as well as driving innovation in the dynamic landscape of AI media tech in close collaboration with our industry partners.

NORWAY NEEDS TO INVEST MORE IN INNOVATION

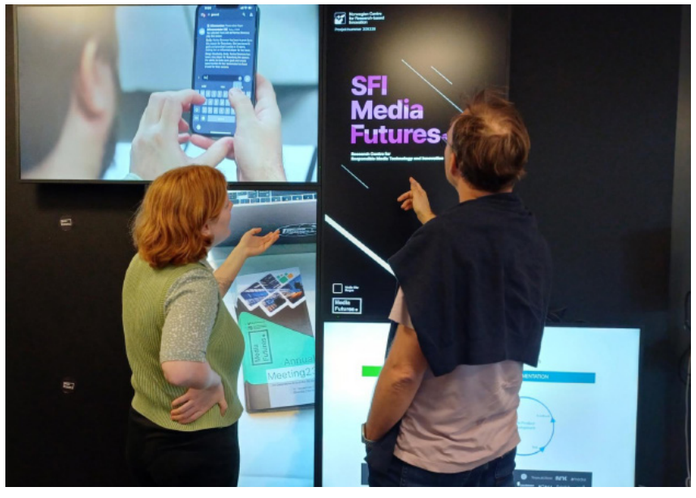
A CALL FOR ACTION

Norway is lagging behind its neighbouring countries in terms of innovation and artificial intelligence. This is due to a lack of cross-political engagement, a conservative research structure, and insufficient practical implementation of concrete measures that require collaboration between academic institutions and industry. There is a clear lack of political will and effective execution.

To address these issues, universities must break out of their traditional roles and invest more in innovation. It should be one of their core missions to support the development of ideas into products, services, and spin-offs. This would allow the institutions to achieve additional returns on their resources. A prime example of success is Kahoot, which started as a spin-off from NTNU. The company has been valued at several billion NOK and contributed to a profit of 1.8 million NOK for the university in 2014, according to the university newspaper.

Unfortunately, many other promising ideas die at the idea stage due to a lack of structures that promote development. Germany and Austria, for instance, have understood the potential of allowing students and staff to work closely with industry through courses, assignments, and placements. More than 80% of companies collaborating with universities in these countries create market innovations through their activities. This collaboration yields significant results and is a key reason why these countries are leaders in innovation.

Norway needs similar initiatives to stimulate innovation and increase competitiveness. One of the key challenges is artificial intelligence (AI), which could potentially increase Norway's GDP by 320-350 billion NOK in a peak year, according to a study by Implement Consulting Group conducted for Google. However, a significant barrier is that the business sector is not sufficiently utilising AI in daily operations, as pointed out by Digitalization Minister Karianne Tung. The report *"The Nordic Race"* from IKT Norway highlights the low number of AI patents in Norway, underscoring the need for a structural cultural change.



Norway suffers from a skills shortage, particularly in entrepreneurship and commercialisation, which slows down the development of new innovative companies. Generative AI could potentially boost Norway's GDP by 9% over ten years, highlighting the need for a broad and cross-political commitment to innovation, similar to what we see in Finland. According to Kari Øritsland, Senior Business Developer at VIS, Finland's success is rooted in a consensus at the highest political level, ensuring that measures are targeted and the commitment is comprehensive.

At the University of Bergen (UiB), we support research-driven ideas through collaboration with Vestlandets Innovasjonsselskap (VIS), which identifies and develops commercially viable concepts from research projects. Together with VIS, MediaFutures develops patents and spin-offs, with one-third of the profit returning to the university. As Espen Rostrup, who leads research-based innovation at VIS, further explains, UiB covers the costs for VIS's services, meaning the inventor incurs no expenses.

This support includes assistance with business development, intellectual property, and legal aid. Additionally, projects can access commercialisation funds from the Research Council of Norway (NFR) for the improvement, testing, and verification of inventions. VIS plays a crucial role in translating research into market-ready innovations, ensuring practical application and societal value creation. This support is essential for overcoming barriers and bringing our innovations to the market — an approach that could benefit many across the country.

To truly foster innovation, we need to think outside the box. Universities must collaborate more with the business sector and support innovation at all levels. The government, in turn, must provide stronger incentives for such cooperation. It's about creating structures that allow good ideas to develop into valuable products and services. With cross-political consensus, increased investment in innovation, and closer collaboration between academia and industry, Norway can compete on par with our neighboring countries. Let's create a future where Norway leads in innovation.

RESEARCH & OUTPUTS

PROJECT REYNIR

FIGHTING MISINFORMATION WITH C2PA

Centre Leader Prof. Christoph Trattner and CEO of Media Cluster Norway Helge O. Svela

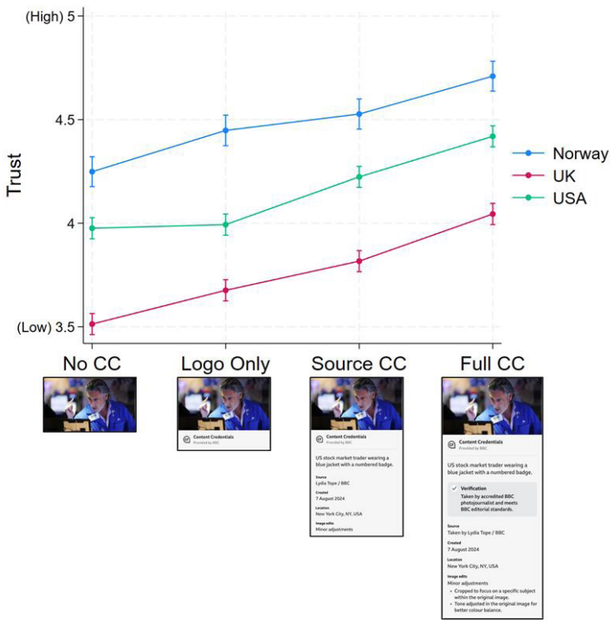
Medieklyngen
Media Cluster Norway

Misinformation, amplified by generative AI, poses a growing challenge to democracy and journalism. Manipulated images are increasingly difficult to detect, making it harder to verify authenticity. To address this, Project Reynir — a collaboration of editorial and media tech companies, interest organisations, and academics within the Media Cluster Norway, many of them also partners of MediaFutures — develops solutions to counter these threats. The project is supported by Agenda Vestlandet with 10 million NOK.

At the core of Project Reynir's work is the Coalition for Content Provenance and Authenticity (C2PA) standard which embeds unalterable metadata into digital media. This technology enhances transparency by enabling users to trace the origin of visual content. Initially tested in Sony cameras, C2PA is now being integrated into Adobe, Microsoft, and BBC workflows.

Project Reynir builds on Project Origin, an alliance of leading publishing and technology organisations like The BBC, Microsoft, and The New York Times, which focuses on verifying the technical integrity of digital content. With support from Project Origin, Project Reynir promotes the adoption of C2PA verification technology among Norwegian media tech companies and advances its development.

In 2024, MediaFutures specifically contributed to the project with a large-scale study across the US, UK, and Norway. Participants viewed news content, including news images, from both highly trusted and least trusted news sources of the respective country. Each image was accompanied by varying levels of C2PA provenance information, detailing edit history and content credentials.



The study examined how displaying this information affects user trust and whether its impact varies by country or news source. Results showed that C2PA indeed increases trust (see figure above), particularly for outlets that are generally less trusted. The team working on this study consisted of Professor Christoph Trattner (PI), Assistant Professor Alain Starke, Associate Professor Erik Knudsen and Research Assistant Svenja Forstner.

AI MODERATOR
ENHANCING BROADCASTED POLITICAL DEBATES

In an era where political debates often prioritise spectacle over substance, AiModerator emerges as a ground-breaking tool designed to bring clarity, engagement, and informed discourse back to the forefront. Developed at MediaFutures in collaboration with Schibsted, AiModerator serves as an event-driven co-pilot, providing real-time, hyper-contextualised information to viewers of political debates. As a multimodal conversational agent (MCA), AiModerator enhances user understanding and participation, making complex political discussions more accessible and interactive.

Bringing Context to Political Discourse

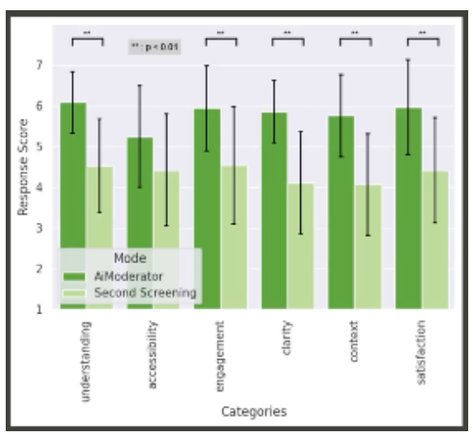
Political debates are a cornerstone of democratic engagement, yet research has shown that they often fail to provide clear, substantive information to viewers. Young adults, in particular, tend to disengage from debates that prioritise rhetorical theatrics over meaningful policy discussions. AiModerator addresses this issue by overlaying a dynamic, touch-based interface onto live debate videos, offering the following features:

- ***Fact Checker*** providing users with evidence-based assessments of candidates' claims in real time.
- ***Stance Checker*** contrasts the positions of different candidates on key issues.
- ***Platform Checker*** relates debate topics to official party policies, placing individual statements in a broader political context.
- ***More Information*** offers additional background on ambiguous terms, acronyms, or references mentioned in the debate.
- ***Explore Topic*** allows users to delve deeper into related subjects based on the ongoing discussion.
- ***Opinion Poll*** lets users compare their viewpoints with the broader audience and political landscape.
- ***React*** provides a simple way for users to express their opinions on candidates' statements through emoji-based feedback.

Through advanced natural language processing (NLP) and computer vision techniques, AiModerator synchronises with debate content in real time, allowing users to fact-check statements, explore candidate positions, and gain deeper insights without interrupting their viewing experience.

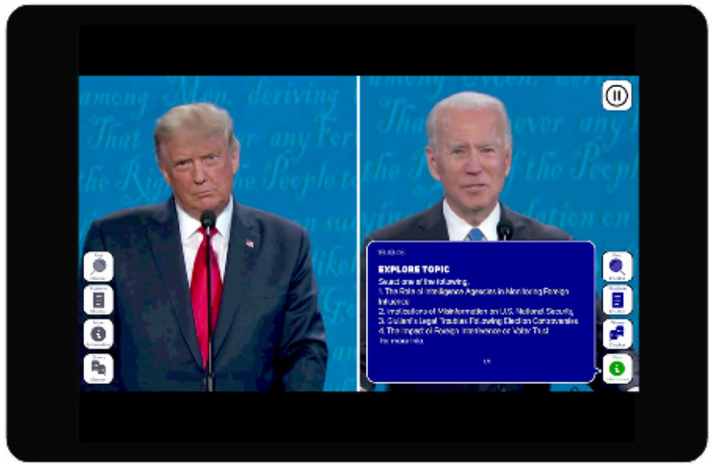
User-Centred Design and Evaluation

AiModerator was rigorously tested through a mixed-method evaluation study involving 20 participants, comparing its effectiveness to traditional second screening methods. The results were striking: AiModerator significantly improved user engagement, understanding, and satisfaction. Participants reported that the system made it easier to digest complex political topics, reduced cognitive overload associated with navigating multiple sources, and fostered a more structured and informed debate experience. While second-screening requires users to actively search for information across various platforms, AiModerator consolidates and presents relevant content seamlessly, enhancing both efficiency and comprehension.



Response score comparing the AiModerator with Second Screening

Full paper

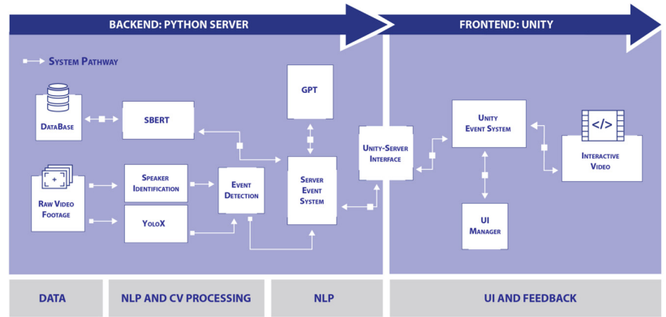


Interactive Features for Informed Engagement

AiModerator's interface is built around both primary and secondary interactive features. Primary features, such as the Fact Checker, Stance Checker, and Platform Comparison, provide immediate access to reliable, contextualised information. Secondary features, including the Explore Topic and Opinion Poll functionalities, encourage deeper engagement by allowing users to interact with debate content dynamically. These elements not only enhance understanding but also create a more participatory vie-wing experience, aligning with modern media consumption habits.

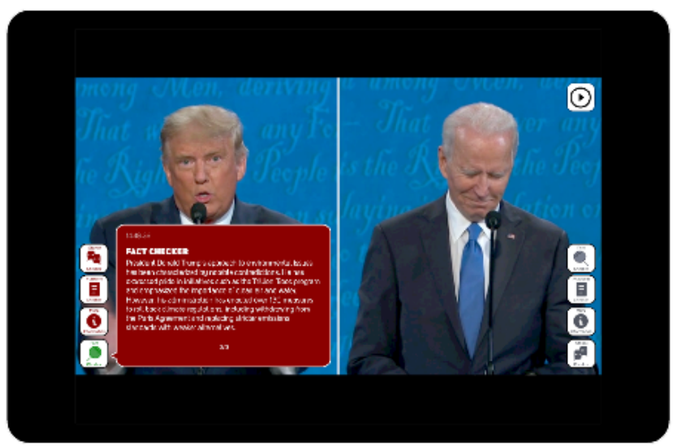
Implications for the Future of Political Engagement

The success of AiModerator highlights the potential of AI-driven tools in fostering informed public discourse. By reducing the barriers to accessing credible political information, the system empowers viewers to critically assess debate content and make informed decisions.



AiModerator system architecture

As misinformation and media fragmentation continue to challenge democratic processes, innovations like AiModerator pave the way for a more transparent, accessible, and interactive political landscape. By combining cutting-edge AI with user-centred design, AiModerator represents a significant step toward re-engaging audiences in political discourse and strengthening democratic participation in the digital age.

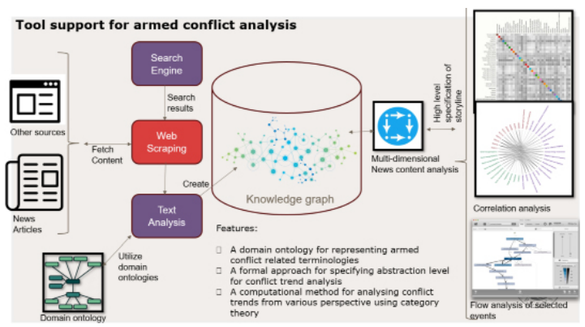


PhD candidate Peter Andrews

MAKING SENSE OF CONFLICT

HELPING JOURNALISTS AND RESEARCHERS TRACK GLOBAL TENSIONS

Associate Professor Fazle Rabbi



System architecture behind the tool

Every day, news headlines report conflicts from around the world. Topics such as territorial disputes, political crises, or large-scale wars are important to cover. These events shape global politics and impact millions of lives. But keeping track of ongoing conflicts, understanding their causes, and predicting their outcomes is a huge challenge. For journalists, researchers, and policy makers, gaining a clear picture of conflicts is crucial. However, with an overwhelming amount of news and information published daily, it is easy to get lost in the flood of reports.

To tackle this problem, Associate Professor Fazle Rabbi has developed a model-based framework to analyse and predict how conflicts unfold. Using category theory, graph theory, and meta-modelling, his approach provides a structured way to track and understand conflict dynamics. Inspired by Johan Galtung's Transcend model, the tool helps users move beyond static descriptions of conflicts, instead offering a structured way to track their evolution, identify key actors, and explore pathways to resolution.

The Challenge: Understanding Conflicts in a Complex World

Conflicts do not happen overnight. They build up over time, influenced by political, economic, and social factors. Different groups such as governments, rebel forces, and international organisations have their own goals and strategies, and their interactions shape the course of a conflict. Traditional methods of analysing conflicts often struggle to capture these complexities. Journalists rely on news reports, political analysts study historical data, and diplomats use experience to predict outcomes. However, these approaches can miss the evolving nature of conflicts, the relationships between involved parties, and the underlying strategies at play.

Assoc. Prof. Rabbi's framework offers a new way to analyse conflict trends by structuring conflicts as dynamic processes rather than isolated events. His system helps experts compare conflict patterns, track escalation, and identify strategies that lead to resolution or further violence.

How It Works

Instead of viewing conflicts as separate events, Assoc. Prof. Rabbi's tool models them as evolving processes. It creates a structured visual representation of conflicts, including:

- *Parties involved* (governments, rebel groups, mediators, and other stakeholders)
- *Causes* (territorial disputes, ideological differences, resource scarcity)
- *Escalation stages* (based on Friedrich Glasl's conflict escalation model, ranging from early tension to full-scale war)
- *Potential resolutions* (negotiations, ceasefires, peace treaties)

By applying category theory and graph-based modeling, the system enables users to analyse how conflicts change over time. It helps researchers track trends, compare past conflicts with ongoing ones, and identify possible outcomes.

Full paper

Video about the tool

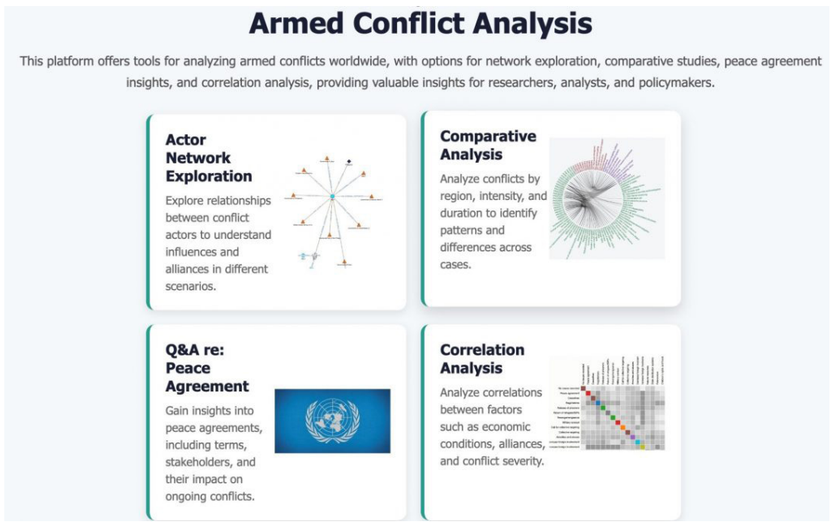
Why This Matters

For journalists, this technology could enhance conflict reporting, helping them present a clearer and more structured view of global events. Instead of relying on fragmented reports, they could follow conflict patterns in a more systematic way. For policy makers and peacekeepers, this tool could offer valuable insights into conflict resolution strategies, helping them predict possible escalations and intervene before tensions turn into violence. In a time where information overload makes it harder than ever to track global events, tools like this could be game-changers — helping us understand conflicts better and work toward solutions more effectively.

Links to Related Work at PRIO

This tool aligns with ongoing research at the Peace Research Institute Oslo (PRIO), which explores conflict patterns, mediation strategies, and geopolitical trends. PRIO researchers have developed methodologies for forecasting conflicts using data-driven approaches, and this model complements those efforts by integrating structured, explainable frameworks for conflict analysis.

Studies at PRIO on conflict early warning systems, negotiation dynamics, and peacebuilding efforts further highlight the need for transparent and systematic tools to support decision-making. By combining these research insights with advanced modeling techniques, this tool represents a step forward in making conflict analysis more accessible, robust, and actionable.



Dashboard of the conflict analysis tool

ENHANCING POLITICAL NEWS CONSUMPTION

Political news consumption is essential for fostering an informed citizenry and supporting democratic processes. It enables the public to make well-informed decisions regarding political candidates, policies, and societal issues. when individuals do choose to consume political news, it is crucial that they are exposed to a diverse range of topics and viewpoints. Selective exposure theory suggests that people tend to favour news that aligns with their preexisting beliefs while avoiding information that challenges their views. This tendency threatens democratic ideals by limiting exposure to diverse perspectives and hindering informed decision-making.

News recommender systems (NRSs) have the potential to mitigate these issues. Advancements in artificial intelligence (AI), particularly generative large language models (GLLMs), present new opportunities to personalise not only news recommendations but also content presentation. Specifically, AI can rewrite headlines to match users' stylistic preferences. This approach has the potential to address both key challenges: increasing exposure to political content and broadening engagement with diverse viewpoints.

The impirical study *Enhancing Political News Consumption Through Headline Style Personalization* proposes a novel approach that leverages LLMs to personalise headline styles as a means of reducing barriers to political news consumption, thereby promoting broader and more equitable exposure to diverse content.

Behind this study are PhD candidate Khadiga Seddik, Associate Professor Erik Knudsen, Professor Damian Trilling and Centre Leader Professor Christoph Trattner. They presented their findings at the workshop Best Practice for Responsible News Recommender Design at Vrije Universiteit Amsterdam (VU Amsterdam) in the Netherlands in September 2024. The research sought to explore a pressing concern: Do NRSs contribute to selective exposure, where users primarily engage with content that aligns with their pre-existing opinions? And how can we encourage people to read articles they disagree with?

The primary contribution of this research is the development of a customised NRS that uses LLM to generate personalised headlines based on readers' stylistic preferences rather than their political preferences. The goal is to investigate how variations in headline style influence the likelihood of readers selecting diverse political articles.

This research builds on two online experiments. The first experiment compares the effects of headline style personalisation versus political preference personalisation on selective exposure to attitude-consistent and attitude-inconsistent articles. The second experiment expands this focus by personalising headline styles across all political articles to encourage broader engagement, independent of political preference alignment.

They found strong evidence for the effect of their personalisation on exposure to political information. Adapting content to match users' style preferences may be a good strategy to counter political selective exposure: It may be possible to attract people into diverse content by making it fit their taste stylistically. Another key finding is that relying on style preferences rather than political preferences aligns with evolving ethical and legal standards. In many jurisdictions, processing data like political preferences is problematic – and also users are reluctant to share such data, or even to accept systems that impute them. contrast, personalising based on style is much less controversial and may lead to much higher acceptance rates.

PhD candidate Khadiga Seddik

EVENT EXTRACTOR

In an age where massive amounts of text data are produced daily, how can machines extract meaningful information about real-world events? PhD candidate Huiling You tackles this challenge in her research through Event Extraction, a field in Natural Language Processing (NLP) that identifies key events — such as protests, attacks, or political decisions — from text.

Making Sense of Events with Graphs

Most existing event extraction systems use a step-by-step approach: detecting words that signal an event (triggers), identifying involved entities (arguments), and classifying their relationship. However, Huiling's research proposes a more holistic approach. She and her colleagues developed ***EventGraph***, a system that represents events as semantic graphs, linking multiple events together to reveal their connections in a text. For example, in a sentence describing a protest where police arrested demonstrators, EventGraph can detect the protest and the related arrest events, helping researchers and analysts understand event dynamics.

Extracting Events from Multilingual Texts

One of the key applications of Huiling's research is the detection of socio-political events, such as protests or conflicts, from multilingual news articles. She tested her system on data from English, Spanish, and Portuguese news sources, showing that her graph-based approach outperformed traditional methods in identifying and linking events.

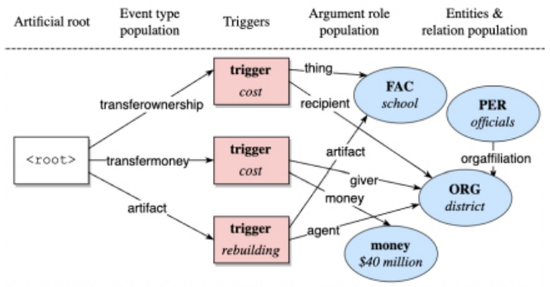
Building on her earlier work, Huiling later introduced ***JSEEGraph***, a more advanced system that combines event extraction with entity recognition and relation detection.

PhD candidate Huiling You

Her work highlights challenges in event extraction:

- Some languages had less training data, making it harder for the system to learn.
- Certain events, like riots or political upheavals, are challenging to classify due to their complexity and involvement of multiple actors.
- Machines still struggle with understanding indirect references

This means that it recognises events and also understands their relationships with people, organisations, and locations. This new system is particularly useful for journalists, political analysts, and researchers who need to quickly make sense of large amounts of textual data.



Example of graph representation for entities, relations, and events from the sentence "School district officials have estimated the cost of rebuilding an intermediate school at $40 million."

Why This Matters

Huiling You's research is helping to make machines better at understanding the real-world impact of events described in texts. This can improve:

1. Media monitoring: Detecting protests, conflicts, and political decisions in news and social media.

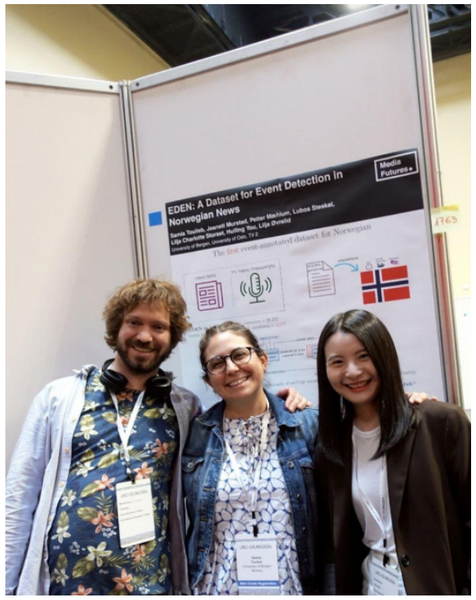
2. Crisis response: Enabling governments and NGOs to track disasters and conflicts in real time.

3. Fact-checking & misinformation detection: Assessing event reporting for missing or misrepresented details.

By teaching machines to extract, connect, and understand events, her work brings us one step closer to a future where AI can assist humans in making sense of the world's complex socio-political landscape.

EDEN

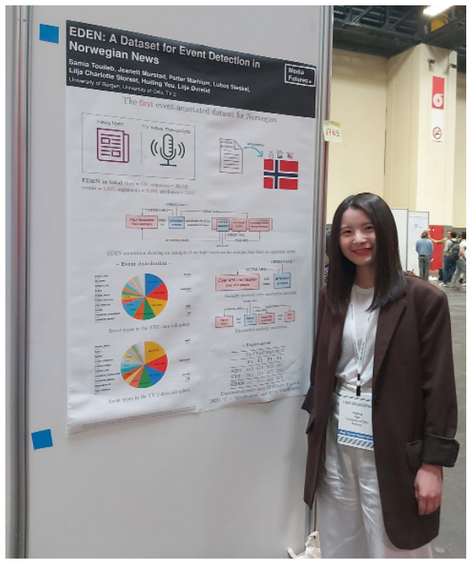
THE FIRST NORWEGIAN DATASET ANNOTATED WITH EVENT INFORMATION



PhD candidate Petter Mæhlum, Assoc. Prof. Samia Touileb, and PhD candidate Huiling You

MediaFutures Associate Professor Samia Touileb, Industry Leader Lubos Steskal from TV 2, PhD candidate Huiling You and Professor Lilja Øvrelid presented EDEN at the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING 2024).

EDEN is the first Norwegian dataset annotated with event information at the sentence level, adapting the widely used ACE event schema to Norwegian. Their paper describes the manual annotation of Norwegian text as well as transcribed speech in the news domain, together with inter-annotator agreement and discussions of relevant dataset statistics. They also present preliminary modeling results using a graph-based event parser. The resulting dataset is freely available for download and use.



PhD candidate Huiling You

EDEN: A Dataset for Event Detection in Norwegian News

Generative Approaches to Event Extraction: Survey and Outlook

CAN AI HELP JOURNALISTS FIND RELATED NEWS FASTER?

In today's fast-paced media landscape, editors and journalists play a crucial role in curating and selecting content for readers. One of their daily tasks is selecting related articles for news stories, helping audiences explore topics in depth and stay informed. Traditionally, this process has been manual, requiring journalists to search through large databases and carefully pick the most relevant stories. While effective, it is also time-consuming and demanding. To tackle this challenge, Bilal Mahmood and his team at MediaFutures explored whether artificial intelligence (AI) could assist editors in selecting related articles more efficiently. Their research focused on using Large Language Models (LLMs) which are powerful AI systems capable of understanding and generating text to create a recommendation tool that could support editorial decision-making.

How Does It Work?

The team integrated GPT-4o-mini, a state-of-the-art AI model, to analyse news articles and automatically suggest related content. Instead of relying on traditional keyword-based search methods, their system takes a more advanced approach by understanding the context and meaning behind the articles. To identify candidate articles, the AI scans a database of news stories and selects a set of potentially related articles using a similarity metric (Cosine similarity). The AI then assigns a relatedness score to each candidate article, evaluating how well it connects to the main story. Based on the scores, the system presents the most relevant articles to journalists, who can then review and refine the selections before publishing.

Bilal's Research Poster

The research has been a result of Bilals secondment at TV2.

Real-World Testing with TV 2

To test their approach, the researchers worked with TV 2, one of Norway's largest media companies. They used a dataset of thousands of news articles to evaluate how well the AI could match human judgment, including real editor-curated related articles. The results were highly promising: The AI-powered recommendation system outperformed traditional methods, such as K-Nearest Neighbors (KNN), in identifying relevant articles. The system's recall rate (how many relevant articles it correctly identified) improved by over 28% compared to the traditional approach. The AI model also provided brief explanations of each article's relevance, helping journalists better understand and trust its recommendations.

Why This Matters for Newsrooms

This research demonstrates the potential for AI to support editorial workflows, making news selection more efficient while maintaining journalistic integrity. Instead of replacing human editors, the system acts as a smart assistant, reducing the time spent searching for related articles and allowing journalists to focus on storytelling and accuracy.

As AI technology continues to evolve, such systems could become a valuable tool in newsrooms worldwide — helping media organisations manage large volumes of related content while improving the reader experience. The next steps for the research team include testing different AI models, refining the recommendation system, and developing a practical tool that editors at TV 2 and other media companies can use in their daily work.

PhD candidate Bilal Mahmood

SMART-PHONES AS WORLD MAKING DEVICES

BOOK PROJECT "IN THE PALM OF THEIR HANDS"

MediaFutures PostDoc John Magnus R. Dahl has conducted a study of six Norwegian boys to understand how they integrate smartphones into their daily lives. His research focuses on the concept of “world-making”, highlighting how boys aged 16 to 19 from Bergen rely on their phones to connect with friends and shape their identities.

Dahl chose to write a book instead of traditional academic papers, aiming to make his findings more accessible to a wider audience. His upcoming monograph, *In the Palm of Their Hands*, is set to be published by Palgrave Macmillan in Spring 2025.

MediaFutures has talked with Dahl about his research process, the insights he gained, and what his work reveals about the relationship between technology, identity, and masculinity.

What is your book about?

- The book focuses on the role that smartphones play in the everyday lives of Norwegian teenage boys, specifically those aged 16 to 19 from Bergen. I was particularly interested in understanding how they socialise with each other and build their identities through smartphones, which are key parts of growing up today.

How did you actually go about doing this research?

– It was an ethnographic study, which basically means I observed a group of six boys over a year and a half. I had different levels of contact with each of them. Sometimes I would follow them offline — like on the school bus, hanging out with friends — and other times, I’d observe them online, checking their social media. They had control over how much they let me in. Some were really open, others were more private.

PostDoc John Magnus R. Dahl

AI-generated image created using OpenAI's DALL·E.

The whole idea was to see how they interacted with each other and with their phones, how they were using their smartphones to build their identities. I use this concept of “world-making,” which means that through the phone, they’re not just communicating — they’re creating a whole social world and shaping who they are.

What did the data show once you’d gathered it?

– I had a lot of notes and data, and I tried to break it down through this concept of world-making. I wanted to see what phones meant to these boys — how they used them to present themselves and reach out to others. One big difference I noticed was how most boys were “familiar-oriented” — using phones to connect with people they already knew. But others, like gay boys, were more “stranger-oriented,” using platforms like dating apps to meet new people.

Norwegian Teenage Boys and their smartphone

How did you find these boys in the first place?

– I recruited them in different ways. I used apps designed for meeting people, I went to after-school clubs, and honestly, I even just asked people at shopping malls. The mall thing was super awkward, though. There was also a practical reason I focused on boys. I felt it was uncomfortable to approach girls, and then, after hanging out with a few of the boys, I realised how much their phone use was influenced by masculinity. That kind of became the focus — how phones are used by boys to enact their masculinity and connect with friends.

Do you think these findings are relevant outside of Norway?

– Absolutely. A lot of what I found can be applied globally. Youth culture in industrialised countries is quite similar when it comes to using technology to shape identities. I chose to write the book in English because it’s relevant for an international audience, not just in Norway.

What do you think parents and teachers could learn from your book?

– I think it’ll help parents understand both the good and the bad sides of smartphone use. The book really shows how gender plays a role in how boys interact online, but it also touches on aspects that apply to girls and other genders too. It’s not about whether phones are good or bad for kids — it’s more nuanced. It’ll hopefully spark a more balanced conversation about what kind of media and tech kids need.

What about the ethical challenges of this kind of research?

– Yeah, there’s always an ethical side to ethnographic work. It’s about being transparent and reflecting on how my own position as a researcher might influence the data. I had to make sure I was treating all the boys equally and not spending more time with those who seemed more “interesting.” I tried to be very detailed in my notes — writing down exactly what was said and what I observed. But, of course, there are limits. You can’t observe everything.

KI-KJETIL

TV 2'S BOLD AI EXPERIMENT

Imagine asking a news anchor any question about the U.S. election and getting a direct answer. That's exactly what one of our industry partners, TV 2, did with their experiment KI-Kjetil. This AI-powered avatar was designed to help Norwegians better understand the complex American election system. But while the technology was exciting, it also raised important ethical questions.

What is KI-Kjetil?

KI-Kjetil is an AI chatbot that looks and sounds like TV 2 journalist Kjetil H. Dale. It answers questions about the U.S. presidential election and TV 2's poll results. Built with advanced AI programs, it can explain difficult topics in a simple way. If an answer is unclear, users can ask it to rephrase.

But here's the twist — KI-Kjetil is not real. His voice is a synthetic creation, trained on almost two hours of Dale's real recordings. His face? A digital copy made with AI. Even though he looks like a real news anchor, he is just an algorithm.

Project leader Chris Ronald Hermansen and MediaFutures Work Package 5 Industry Leader Lubos Steskal presented KI-Kjetil at our Annual Meeting to an astonished audience with many questions.

Why Did TV 2 Create This?

TV 2 is experimenting with AI to see if it can make news more personal and engaging. The goal is to help people of all knowledge levels understand the U.S. election. They wanted to also make it clear to the global audience what is the technology capable of doing and start a conversation, about how to use it responsibly. AI is becoming a big part of the media industry, and TV 2 wants to explore its possibilities while staying true to journalistic ethics.

MediaFutures WP5 Industry Leader Lubos Steskal and Project Leader Chris Ronald Hermansen

Can We Trust an AI Journalist?

TV 2 says yes, but with caution. They have placed strict limits on what KI-Kjetil can say, ensuring that his answers follow facts and journalistic standards. Unlike many AI chatbots, KI-Kjetil does not generate opinions or speculate. Instead, he is programmed to provide fact-based, objective answers. Still, mistakes can happen. TV 2 admits that the avatar is an experiment and was only available until the election results were final. The newsroom was monitoring its performance and correcting errors when needed.

Will AI Replace Journalists?

No. TV 2 is clear that real journalists are still essential. While AI can be helpful, it cannot replace human decision-making, critical thinking, or ethical judgment. TV 2 follows strict journalistic guidelines and ensures that human editors oversee all AI-generated content. KI-Kjetil is an interesting step toward the future of news. But it also raises important ethical questions: Should AI present the news? Can we trust information from a digital face? As AI in journalism grows, these are debates we will hear more about. For now, KI-Kjetil is an experiment. One that shows both the potential and risks of AI in media.

EXCELLENCE

WINNER OF THE 2024 GLOBAL MEDIA AWARDS

ENHANCED RECOMMENDER SYSTEMS FOR NEWS READER ENGAGEMENT

On April 25, 40 first-place recipients were honoured during the 2024 Global Media Awards in London. One of them was MediaFutures Partner Bergens Tidende (BT) in cooperation with Professor Mehdi Elahi and UiB student Peter Kolbeinsen Klingenberg.

Their "Personalised News Experience" won the first prize in the category *Readership and Engagement, Regional Brands*.

"Of course I am excited about this. It was a great collaboration between us in MediaFutures and BT as our industry partner", says Professor Mehdi Elahi and adds: *"I believe, it was well deserved. The findings of the thesis showed effectiveness of the recommendation approach."*

Using content- and behavioural data for recommendations in the Norwegian news market

The project started with Peter's master's thesis, where he looked into using data about what people read and how they behave to suggest news articles.

In his thesis, he focused on two recommendation techniques. One is collaborative filtering which generates recommendations based on what what people with similar interests read, while the other looks at the content of the articles themselves.

"We tweaked and experimented a lot with how we recommend articles on bt.no, which may be less appealing than a very concrete project to improve reader engagement. Our nomination was actually a combination of two several projects: one internal project for frontpage optimisation, and another project on optimisation for increasing article recirculation (this project was part of the MediaFutures collaboration)*"*, says Data Scientist at BT, Thomas Husken.

Professor Mehdi Elahi and Bergens Tidende Data Scientist Thomas Husken supervised Peter's master thesis

Master thesis

Both methods seemed to help get more people to click on articles, but focusing on the article content stood out as the best.

Significantly lifting CTR for BT

We want to congratulate Peter Kolbeinsen Klingenberg, Professor Mehdi Elahi and Thomas Husken for achieving such a commendable outcome through their professional collaboration.

By using a special language model called sBERT, made by the National Library's AI Lab, they could compare articles and suggest the top 5 most similar ones for people to read more.

Using this method, they saw a 20% increase in the number of clicks compared to the old system Bergens Tidende used.

"The award definitely came like a surprise, for several reasons. I didn't expect to receive an award for our work that is a bit more abstract in nature than some other nominees.", Husken says and continues:

"Besides AI, personalisation is the one thing that every news brand in the world is working on in some way. To be recognised for that in a global award, is absolutely amazing."

From left to right: Peter Kolbeinsen Klingenberg, Jan Stian Vold, Frode Haugland Pedersen, Liv Solli Okkenhaug, Hanne Louise Åkernes, Trond Olav Skrunes, Thomas Husken, Magnus Helgesen (in the front)

WINNER OF THE NEW MEDIA WRITING PRIZE

BLENDING LITERATURE AND CODING

With ‘I Dreamt of Something Lost’, former Research Assistant Florence Jane Walker has created an interactive story that explores data-conscious electronic literature. Having recently won the main category of the New Media Writing Prize, her project stands as a remarkable example of how one can combine literature and coding.

“I Dreamt of Something Lost” (IDoSL) tells the story of Jules, an agoraphobe who receives an instant message from their ex-girlfriend — who passed away exactly one year prior. On a literal level, IDoSL is about sitting at your computer and encountering somebody who is no longer in your life. On an emotional level, it is concerned with grief, loss, and memory – as mediated through the vast amounts of data that now permeate our lives. It is about the fragility of the digital historical record, about dealing with loss, and about the urge to save something that does not want to be saved.

The narrative acts as proof of concept for the Phantasos Template: a code library designed to help digital artists and writers work with a fake desktop interface. It was made with Unity and the ink narrative scripting language.

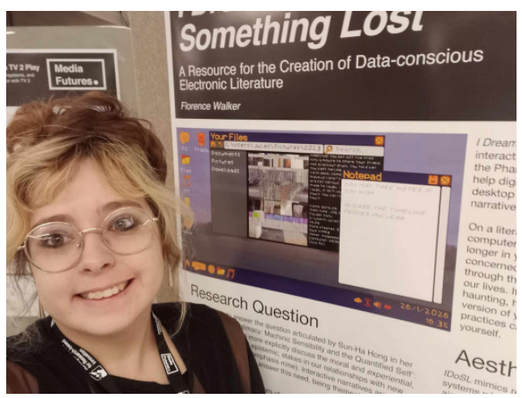
Double Recognition for IDoSL

“In all honesty, I’m a bit exhausted! All of the high emotions surrounding it have been quite draining. That said, I’m overjoyed. It’s a lovely confidence boost to have, as an emerging writer. It’s put a spring in my step.”, says Florence herself about the prize.

The New Media Writing Prize (NMWP) encourages and promotes the best in new-media writing and is leading the way toward the future of the ‘written’ word and interactive storytelling. This international event is now in its 13th year.

IDoSL won also the prize for the best Demo at MediaFutures Annual Meeting 2023. After proving that the story stands out among other projects, Florence gives a possible explanation for its success:

“Evaluating stories and art is always deeply subjective, so I don’t feel able to give a reason other than that. I could speculate that IDoSL speaks to a particular cultural moment we find ourselves in but, in my opinion, many of the other entries also did that. I think it’s difficult to make electronic literature without engaging to some extent with what the digital is and what it means to us today.”



Florence Walker

Demo

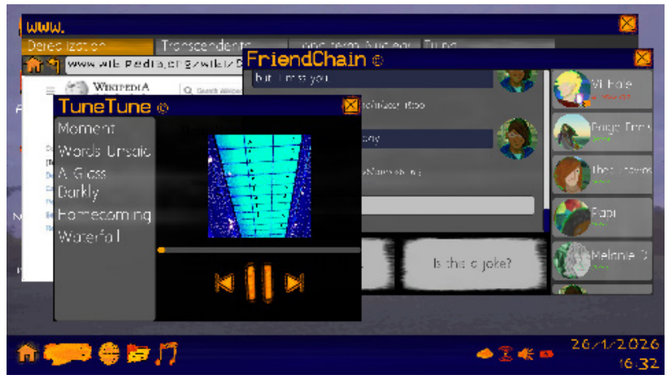
The making of IDoSL

Florence’s written master thesis was largely concerned with documenting the making process – in particular, how she learned C# for the project. All of the code she wrote for IDoSL is available on GitHub, as well.

Her work aims to address the question posed by Sun-Ha Hong in the article “Data’s Intimacy: Machinic Sensibility and the Quantified Self”: How to explicitly discuss the moral, experiential, technical, and epistemic stakes in our relationships with new technologies. Florence believes interactive narratives are uniquely suited to this task, providing constructed experiences of play. Through a ‘fake-desktop’ narrative game, she explores the experiential qualities of personal data.

Florence’s work includes multiple layers, both explicit and implicit. At the end of the credits, she leaves a message for the reader: *“I hope the things you grieve return to you, if only in some small way.”* Other hidden messages within the prototype are left for readers to discover.

Florence' poster



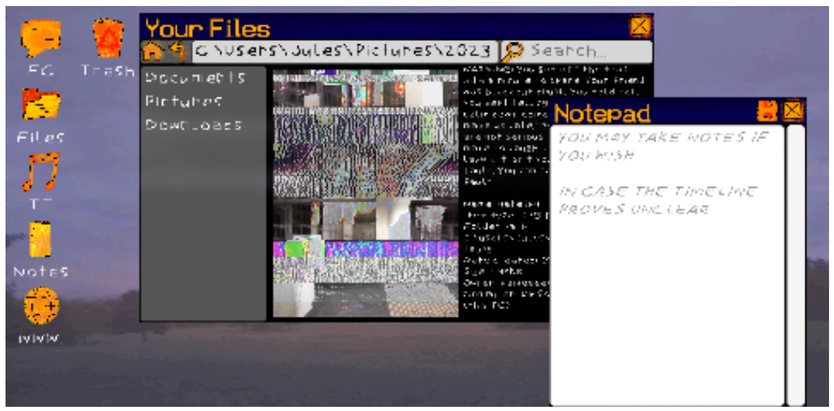
Screenshot of the project

“It is my hope that this project can open a doorway for other artists and writers to explore data and/or the desktop interface through storytelling. I had very little experience with coding prior to starting work on the thesis – I want to send the ladder back down for others, however I can.”

Future projects

Florence Walker has several projects in the pipeline. She has a piece of electronic literature forthcoming from Crawlspace and recently participated in a collaborative work session with Declarations, an artistic research project exploring the poetic materiality of CSS. She is also in the early stages of developing a text-based game called “How to Make it Home,” where players navigate an alienating urban landscape at night. Additionally, Florence is gradually working on a novel.

“In short, I’m continuing to write and make things – sometimes with others, sometimes alone. I’m enjoying it a lot.”



Screenshot of the project

AWARD FOR BEST PAPER

NORWEGIAN MEDIA RESEARCH CONFERENCE 2024

Associate Professor Erik Knudsen won the Best Paper Award at the Norwegian Media Research Conference 2024.

Norsk Medieforskerlag awards the prize for Best Media Studies Paper in connection with their conference every other year. In 2024, the award went to Erik Knudsen's paper ***"Modeling News Recommender Systems' Conditional Effects on Selective Exposure: Evidence from Two Online Experiments"*** in Journal of Communication (2023).

The jury highlighted Knudsen's use of complex methods, and how the work has affected how we research and understand digital media. The article has received recognition both within and beyond the field of media studies.

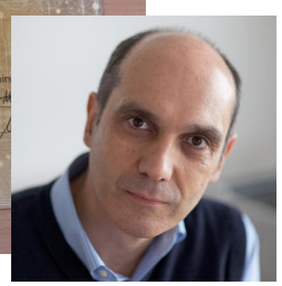
Associate Professor Erik Knudsen

Full paper

AWARD FOR BEST RESEARCH

EKAW 2024

Professor Enrico Motta and his team won the Best Research Paper Award at EKAW 2024 for his paper "Capturing the Viewpoint Dynamics in the News Domain".



Professor Enrico Motta

Full paper

PhD Candidate Huiling You

Master student Snorre Åldstedt

ANNUAL MEETING AWARDS

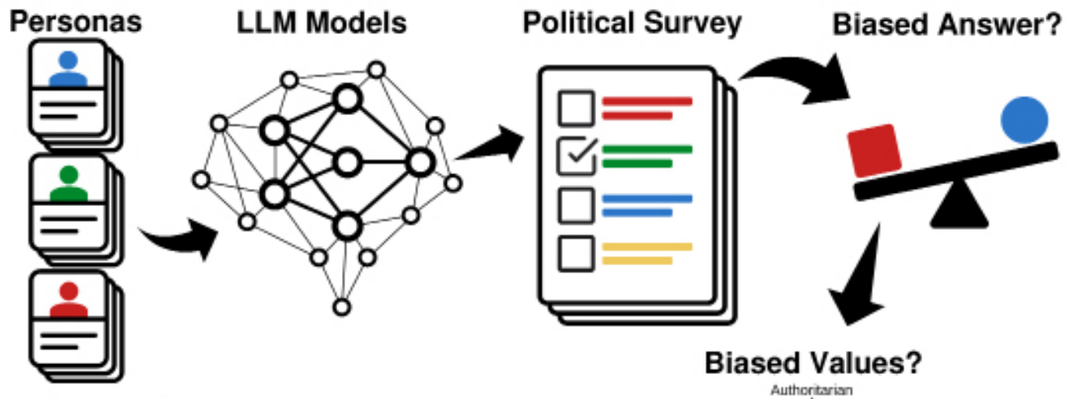
The Poster & Demo Award at MediaFutures' Annual Meeting awards interactive pitches, recognising the innovative efforts of participants. The winners included PhD candidate Huiling You (Best Demo: Event Extractor) and UiB student Snorre Åldstedt (Best Poster).

Event Extractor Demo by PhD candidate Huiling You and Svenja Forstner

Investigating and Measuring Bias in Generative Language Models

Snorre Åldstedt, Master's in Information Science (UiB)
Supervisor: Samia Touileb (UiB)

Media Futures



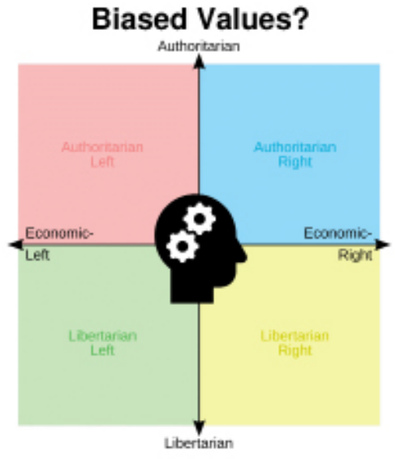
Abstract and Idea

LLMs are rapidly evolving and are integrated more and more with technology we use on a day-to-day basis. Just as we humans are biased, the generative language models we use might also be biased. The models often learn and amplify harmful bias. In this project we'll explore and try to detect these harmful social biases.

We are inspired by the work of Motoki et al., 2023 and Plaza-del-Arco et al., 2024 and will combine persona-based prompting and questionnaire to measure political ideologies.

Models
NorMistral
NorBloom
NorwAI-Mistral
NorwAI-Llama2
Viking
Llama-3

Table: Models used in this project
Blue: Norwegian, Green: Multilingual



Research Questions

1. Do Norwegian Language Models stereotype gendered-personas when it comes to political ideologies?
2. How do Norwegian Language Models compare to Multilingual-, and English models regarding political- and gender bias.

Expectations

English and multilingual models tend to be biased towards the left when it comes to political bias(Motoki et al., 2024). At the same time, they also generally stereotype genders (Plaza-del-Arco et al., 2024). Our hypothesis is that the Norwegian models will have the same tendencies as the English and the multilingual models. When mixed, we think that it'll stereotype women to the left and men to the right on the political spectrum

PARTNERS

amedia Schibsted 2
NRK Bergens Tidende
nb.no VIZRT WOLFTECH
NORCE Faktisk.

HOST

UNIVERSITY OF BERGEN

FUNDED BY

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Forskningsrådet Norwegian Centre for Research-based Innovation

PUBLIC OUTREACH

From left to right: Communication Officer Janina Wildermuth, Innovation Officer Christopher Senf, PhD Candidate Anastasiia Klimashevskaia, Administrative Coordinator Anne Nielsen, Centre Leader Prof. Christoph Trattner

CHRISTIE CONFERENCE

APRIL 23

2200 PARTICIPANTS

The Christie Conference aims to be UiB's key forum connecting research, politics, administration, culture, society, and business. Held annually in late April at the University Aula, it's named after Wilhelm Frimann Koren Christie, founder of Bergen Museum, a prominent political figure, and a bridge between the museum and societal stakeholders. On Tuesday, April 23rd, the Christie Conference 2024 takes place at the University Aula.

The Christie Conference aims to be UiB's foremost platform for connecting research, politics, administration, culture, society, and business. Held annually in late April at the University Aula, the conference draws its name from Wilhelm Frimann Koren Christie. As the founder of the Bergen Museum and a prominent political figure, Christie served as a unique bridge between the museum and stakeholders in politics and society.

2024's conference focused on Europe in the future. What will Europe look like in 10 years, and how can Bergen and Norway leave their mark on its development?

The future of media in an era of fake news, filter bubbles, and online cultures of polarization raises crucial questions. MediaFutures, a world-leading research-based Innovation Centre hosted at the University of Bergen, is dedicated to addressing these pressing challenges. Through collaboration with key media players in Norway such as NRK, TV 2, Schibsted, and technology companies like Vizrt and Faktisk.no, the Centre's mission is to build trust in the media, combat misinformation, and create new channels for verified news dissemination. Leveraging emerging AI technology, MediaFutures aims to generate groundbreaking insights and state-of-the-art media technology for responsible and effective user engagement, content production, interaction, and accessibility.

At our booth, MediaFutures demonstrated how to fine-tune biases underlying our media platforms' recommendation systems, and showcased a cutting-edge digital sports commentator driven by artificial intelligence (providing a glimpse into the future of media).

NMD: MEDIA SURVEY 2024
AMERICAN CONDITIONS

Usually, it takes more than two years to do research," says MediaFutures Associate Professor Erik Knudsen to Khrono and continues: *"But, for the Media Survey, I don't have more than some months."*

Undoubtely one of the highlights at the Nordic Media Days is the yearly Media Survey.

From its launch in 1999 until today, the Media Survey's purpose is to showcase how the relation between media and its audience in Norway has changed. It also collects the opinions on media from journalists.

Associate Professor Erik Knudsen has taken over the lead in the survey since 2018, next to his engagement in our Work Package 1 on Understanding Media Experiences and Work Package 2 on Recommender Systems.

Trust in media – comparing Norway and the US

Last year, Knudsen published a paper which provides evidence to suggest that trust in Norwegian media actually increased during the pandemic opposed to what one could expect.

Additionally to monitoring the development of trust in Norwegian media for the annual Media Survey, the team around Knudsen also surveyed U.S. Americans this year, thus the title *American conditions*.

How and from where do Americans gather political information, and how critical are they of their sources? How do they perceive the degree of freedom of speech and the polarization in society? Do they feel the impact of a cancel culture, and how does it affect them?

"It is interesting to see the contrast of how Norwegians versus U.S. Americans think about the election in America", he says.

"The clear differences between Norwegians and Americans can provide an indication of the news we consume and the type of issues from the USA that Norwegian media cover", Knudsen explains.

Avoiding news

2024 was also the first year the team around Knudsen asked whether journalists and non-journalists actively avoid news or specific topics in media.

The result that Knudsen presented in the interview with Klassekampen shows that the proportion of news avoiders among Norwegian journalists and editors is higher than among the general population. While 28% of the population state that they "sometimes" avoid news, the figure is 32% among journalists. Especially the war in Gaza is a topic which the respondents actively avoid.

Not long ago, on February 16th, MediaFutures Work Package 1 hosted a seminar on the development of news use and avoidance. MediaFutures partner NRK looked at how Norwegians, particularly young people, use and avoid the news. With data from NRK's Youth survey, Reuters Digital News Report, Norsk Mediebarometer, Opinions UNG2024 and more, seminar speaker Ingvild Hjertaas presented some new features in how news is consumed – and avoided.

Focus on AI and ethics

Associate Professor Erik Knudsen, who is responsible for ensuring that the content adheres to academic standards, took over the job of Frank Aarebrot. He made the survey wider and opened up for opinions of journalists.

A special focus has been set on the use and identification of AI in media, a topic which we in MediaFutures have been working with for many years.

AI technology has shown to be of great value in many different application domains; however, it has also raised significant ethical issues, including, e.g., the creation of echo chambers in online media systems, and caused political polarisation and controversial or questionable election outcomes. To address these challenges, our centre conducts research and develops products directly together with our partners from the media industry.

The Media Survey 2024 has been conducted by Respons Analyse on behalf of the Nordic Media Days and is carried out among a representative sample of the population in the USA, as well as members of the Norwegian Journalists' Union, the Norwegian Editors' Association, and a selection of the general population in Norway.

MAY 7-9
2000 PARTICIPANTS

Associate Professor Erik Knudsen

UIB AI EVENTS

From left to right: Head of Department of Information Science and Media Studies Professor Marija Slavkovik, Assoc. Prof. Samia Touileb, and PhD candidate Anastasiia Klimashevskaia

UiB AI is a platform to coordinate, promote and make visible research, education and innovation initiatives in artificial intelligence at the University of Bergen, and to facilitate for collaboration and contact both between faculties of UiB and with partners and collaborators outside of UiB.

Many professors and researchers were invited to talk at UiB AI events in 2024. Associate Professor Samia Touileb, co-leader of WP5 at MediaFutures, organised and moderated a workshop on *"Aligning AI with Human Values: Challenges and Solutions"*, with talks from leading researchers in AI Alignment and ethics. Also PhD candidate Anastasiia Klimashevskaia gave a talk on *"News in AI age: Alignment with Editorial Values and Ethics"*.

From left to right: Assoc. Prof. Samia Touileb, Postdoctoral Researcher Davide Liga, Dr. Emily Collins, and Researcher Vinit Ravishankar

Presenters were

Prof. Jan Broersen
Department of Philosophy and Religious Studies, Utrecht University

Nardine Osman
Tenured Scientist at the Artificial Intelligence Research Institute (IIIA), Spanish National Research Council (CSIC)

Dr. Emily C. Collins
Dame Kathleen Ollerenshaw Fellow at the Department of Computer Science, University of Manchester

Dr. Vinit Ravishankar
Independent researcher in multilingual language technology

Nadin Kokciyan
Director of the Human-Centered AI Lab (CHAI Lab), University of Edinburgh

Marija Slavkovik
Professor at Department of Information Science and Media Studies, University of Bergen

BERGEN-BOSTON FORUM

Participants at the "AI & Political Conflict" Event 2024

This event was part of the Boston-Bergen Forum on Digital Futures, an international research network connecting UiB's research groups *Culture, Society & Politics* and *Practical Philosophy* with SFI MediaFutures Research Centre Bergen, the Applied Ethics Centre at UMass Boston, and the MIT Program on Human Rights and Technology.

Through interdisciplinary discussions, the event examined the technological, normative, and economic principles shaping AI-driven political conflict. The hybrid format allowed for global participation, reinforcing the growing collaboration between scholars across institutions.

This workshop exemplified our commitment to advancing critical discussions at the intersection of AI, ethics, and political philosophy, and we look forward to continuing this dialogue in future editions.

In May 2024, we hosted our second international workshop, *"AI & Political Conflict"*, a two-day event held at the MediaFutures Research Centre and the Philosophy Department at UiB. The workshop brought together leading scholars to explore the influence of AI-based platforms on political discourse, deep disagreement, and conflict. The workshop featured an outstanding lineup of speakers, including:

Prof. Dr. Natali Helberger (University of Amsterdam)
Prof. Dr. Gloria Origgi (CNRS Paris)
Prof. Dr. Filipe Campello (Universidade Federal de Pernambuco)
Prof. Dr. Anna Maria Lorusso (University of Bologna)
Ass. Prof. Dr. João Vieira Magalhães (University of Groningen)
Prof. Dr. Anat Biletzki (Quinnipiac University)
Dr. Leif Hemming Pedersen (Roskilde University)
Asst. Prof. Carl Öhman (Uppsala University)
Dr. Eugenia Stamboliev (University of Vienna)
Dr. Mark Thomas Young (UiB)
Prof. Dr. Maria Brincker (UMass Boston)
Jacob Burley (UMass Boston & Harvard)

Dr. Gloria Origgi from CNRS Paris

Research Fellow at UMass Boston Jacob Burley

MAY 30-31

ACM UMAP

UMAP '24
CAGLIARI • ITALY

The main page of artificial news site used in the experiment

Four research papers from MediaFutures were presented at the 32nd ACM International Conference on User Modeling, Adaptation, and Personalization (ACM UMAP) 2024, a premier event for groundbreaking advancements in user-adaptive systems. This conference covers a broad spectrum of topics, including adaptive websites, personalised learning, and recommender systems.

Amongst the researchers were MediaFutures professors, research assistants and PhDs, almost all of them part of the research group DARS (Behavioral Data Analytics & Recommender Systems Research Group).

Centre Director Professor Christoph Trattner expresses his satisfaction in witnessing MediaFutures PhDs being at the forefront of the research:

"*It's rewarding to see that our work is making a difference not just in the academic world, but also for our industry partners.*"

JULY 1-4
150 PARTICIPANTS

Perception versus Reality: Evaluating User Awareness of Political Selective Exposure in News Recommender Systems

– Alain D. Starke, Anders Sandvik Bremnes, Erik Knudsen, Damian Trilling, Christoph Trattner

This study looked into how aware people are of getting news that matches their political views from recommendation systems. These systems are commonly used to customise news for users based on what they like, but they often end up showing similar perspectives, which can limit diversity. MediaFutures Assistant Professor Alain D. Starke, Associate Professor Erik Knudsen, Professor Damian Trilling, Professor Christoph Trattner and Research Assistant Anders Bremnes designed an online experiment in which users were asked to select any number of news articles that matched their political orientation (i.e., Democrat or Republican) from a list of 50 news articles (5 Democrat, 5 Republican, 40 filler articles). The researchers wanted to see how well people could tell if an article matched their political bias. Some articles were clearly labelled as leaning towards a political side, while others were filler articles. Surprisingly, they found no big difference in how people picked articles between those shown the articles in a random order, and those shown clearly on top of the page. However, they noticed that Republicans had more trouble than Democrats in finding articles that matched their views.

Emotional Reframing of Economic News using a Large Language Model

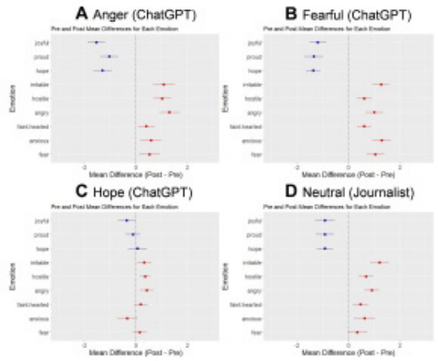
– Jia-Hua Jeng, Gloria Anne Babile Kasangu, Alain D. Starke, Christoph Trattner

MediaFutures Ph.D. candidate Jia-Hua Jeng collaborated with Assistant Professor Alain Starke, Professor, Centre Director Professor Christoph Trattner, and Research Assistant Gloria Anne Babile Kasangu on a study about emotional framing techniques and trust in the media. Together, they investigated how ChatGPT's emotional framing of news impacts readers' emotions and trust compared to framing by human journalists. Their focus included emotions such as anger, fear, hope, and neutrality (typical of journalists). The results revealed that news framed with anger and fear by ChatGPT triggered stronger negative emotions in readers compared to human-framed news. However, hopeful framing showed minimal overall changes. Surprisingly, trust in the news remained consistently stable across all framing conditions. The paper delves into the implications of these findings, particularly regarding how emotional framing might contribute to societal polarisation issues.

Incorporating Editorial Feedback in the Evaluation of News Recommender Systems

– Bilal Mahmood, Mehdi Elahi, Samia Touileb, Lubos Steskal, Christoph Trattner

The third accepted paper tackled the complex interplay between editorial control and personalisation within recommender systems. MediaFutures Ph.D. candidate Bilal Mahmood conducted together with Professor Mehdi Elahi and Associate Professor Samia Touileb, as well as Data Scientist at TV 2, Lubos Steskal and Professor Christoph Trattner experiments to evaluate the relevance of recommendations from an editorial standpoint. Using data from TV 2 Norway, a major editor-managed media house, they compared algorithm-generated recommendations, utilising the K-Nearest Neighbor (KNN) model and various text embedding techniques to analyse different parts of news articles (e.g., title, lead title, body text, and full text), against editorial feedback.



Pre-Post differences (means and std. errors) for nine different emotional states across the four conditions in this research

The results highlight the recommendation system's effectiveness in meeting editorial expectations. Mahmood discovered that TV 2 could achieve approximately 30% alignment with editorial recommendations using their approach, a promising outcome with significant implications for the recommender system community.

Shaping the Future of Content-based News Recommenders: Insights from Evaluating Feature-Specific Similarity Metrics

– Daniel Rosnes, Alain D. Starke, Christoph Trattner

This paper is about improving how news articles are recommended to readers. The researchers faced challenges because news content and readers are always changing. They tested different ways to measure how similar news articles are to each other, using a group of people to judge this.

The study had three main findings:
A new way of measuring similarity (using the large language model based metrics SBERT) matched closely with what people thought. The differences between national and local news were small and mostly not important. While it's possible to suggest similar news articles automatically, the quality and suitability of these suggestions can vary. The paper provides insights that could help design better systems for suggesting news articles based on their content and other factors. This could make it easier for readers to find news that is relevant and interesting to them.

SEPTEMBER 16-17

60 PARTICIPANTS

The Nordic Personalisation Days, held on September 16-17 in Gothenburg, Sweden, brought together around 60 participants, mostly from Scandinavia, to explore the ethics and responsibilities of AI-driven recommendation systems. The event was a great opportunity for networking, knowledge sharing, and sparking fresh ideas.

SFI MediaFutures made a strong contribution with presentations from PhD candidates Jia-Hua Jeng and Bilal Mahmood, as well as from Professors Mehdi Elahi and Dietmar Jannach and Assistant Professor Alain D. Starke. PhD candidate Khadiga Seddik also presented a poster, alongside Jeng and Mahmood.

Seddik's poster showcased her upcoming research paper, while Alain Starke took on the role of panel moderator for a lively discussion on the main theme of the conference. The panel included industry experts such as Peter Knees, Marko Tkcalcic, Lubos Steskal from TV 2, and Simen Buobb from VG.

Professor Dietmar Jannach and Assistant Professor Alain Starke

The event kicked off with a keynote by Peter Knees, Associate Professor at TU Wien, who highlighted the need for academia to strengthen policies around research-industry collaborations. He emphasised the importance of universities prioritizing ethical research and ensuring their work serves the public interest.

PhD candidates Khadiga Seddik and Bilal Mahmood

The second keynote speaker, Martin Tegner, Principal Data Scientist at IKEA, shared insights into how IKEA uses data to shape online customer experiences, blending 80 years of home-furnishing expertise with the latest in AI technology.

The event sparked deep discussions on topics such as polarization, long-term evaluation of systems, and the ethics of recommendation algorithms, fostering meaningful ideas that could drive future collaborations and innovations.

NORDIC PERSONALISATION WORKSHOP

ACCESSIBILITY WORKSHOP

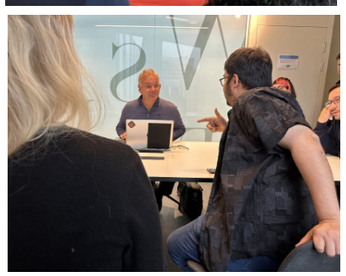
How to advance accessibility of digital learning and media platforms?

Around 50 researchers, PhDs and industry experts gathered on September 16 and 17 in Oslo to foster development of accessibility of digital learning and media platforms. Together with Schibsted Media and TV 2 Skole, MediaFutures WP4 for Media Content Interaction & Accessibility organised a workshop funded by COST Action on Media Accessibility (LEAD-ME) to bring together users with digital needs and researchers.

***"We want to wake people up",* explains Managing Director of TV 2 Skole, Yngvar C. A. Nordberg.**

He is the daily manager of the learning platform elevkanalen.no and the organisation Digjobb.no. Both were the basis of the workshop, facilitating authentic users of digital learning tools and a platform to test them.

One fits one, not all



Among the 12 experts present, one principle stood out: there is no one-size-fits-all solution for digital accessibility. Every user has unique needs, requiring different methods to navigate digital platforms. To demonstrate this principle, TV 2 Skole invited five users, each employing various tools to access the internet, demonstrating the diversity of accessibility needs.

Amongst them was Thea, half blind, who still goes to school. She relies mainly on zoom to navigate, but often also uses text-to-speech technology since she prefers to have an increased speech speed to follow along.

"I get easily bored when the voice reading the text is too slow. I need it to be really fast", Thea shared with a group of PhD candidates and industry observers. Another user introduced to the group was Emil, who is blind and uses both a braille display and a laptop keyboard for web navigation. Braille is a tactile writing system used by people who are visually impaired.

A screen reader helps him interpret content on the screen, but he pointed out significant shortcomings with picture descriptions.

"When you're blind, you don't know how a normal shark looks. A good description would be, 'Here we can see a man with a white shirt.' But just saying, 'Here we see a man' isn't helpful", Emil explained to the PhDs.

User testing is always necessary

While the PhD students were already familiar with accessibility issues, the hands-on demonstrations made a strong impact. Iga Szwoch, a PhD candidate from SWPS University in Poland, was especially intrigued by the Braille tactile system, noting that she hadn't known it could be used for writing.

Schibsted 2 Skole

SEPTEMBER 16-17
50 PARTICIPANTS

"I learn a lot here and get inspired on how to use it for my work".

Puneet Jain, a PhD candidate from Zurich University of the Arts and Concordia University in Canada, echoed this sentiment, highlighting the value of observing how these tools are used in everyday life. *"It was quite interesting to see how these new tools actually are used in daily life and where they still have issues or restrictions"*, he said.

Not enough has been done

Daniel Gloppestad Bajer, UX Designer at TV 2 Skole and one of the workshop's organisers, explained how elevkanalen operates as a platform for educational content. He emphasised the importance of user-centred design in their work. *"Digjobb complements the educational content on our platform by providing user testing and focusing on practical, user-driven tasks. The link to real users is crucial"*, Daniel said.

FUTURE WEEK

SEPTEMBER 25-26
300 PARTICIPANTS

We in SFI MediaFutures work together with industry experts who spoke at Future Week 24 in Bergen. One of them is MediaFutures Steering Board member and Industry Partner in WP4 Jan Stian Vold from BT who shared his experience moving between editorial and product development roles. He highlighted the key differences, strengths, and challenges of both areas, and discussed what they can learn from each other. He also suggested changes each culture could adopt to improve.

Steering Board Leader Christian Birkeland and Steering Board member Pål Nedregotten

Dr. Sergej Stoppel discussed how Wolftech uses C2PA to help journalists verify and authenticate content, ensuring trust and accuracy in reporting while addressing the pressures of modern media.

Pål Nedregotten, CTO of NRK, shared his perspectives on the current challenges and future demands in media technology, discussing the balance between building in-house solutions versus buying off-the-shelf products, the role of AI, and the most exciting broadcast technologies on the horizon.

Dr. Sergej Stoppel, Chief Innovation Officer at Wolftech

WOLFTECH
NRK
Medieklyngen Media Cluster Norway
Bergens Tidende

Associate Professor Fazle Rabbi

Deputy Rector of UiB, Pinar Heggernes

NIKT

SEPTEMBER 25-27

110 PARTICIPANTS

The 36th Norwegian ICT Conference for Research and Education served as a key gathering for ICT researchers across Norway, taking place from November 25 to November 27 at NG5, University of Bergen. Hosted by the Department of Information Science and Media Studies at the Faculty of Social Science, the event was organized by Associate Professor Fazle Rabbi, who also co-leads Work Package 3. The conference received support from SLATE and SFI MediaFutures.

As an annual event, the conference offered a platform for professionals and academics to exchange ideas and research in ICT, featuring four main tracks: the Norwegian Informatics Conference (NIK), the Norwegian Conference for Organizations' Use of IT (NOKOBIT), the Norwegian Information Security Conference (NISK), and the Norwegian Conference for Education and Didactics in IT Subjects (UDIT).

The academic program included several peer-reviewed papers showcasing cutting-edge research in the field, with contributions from four distinguished keynote speakers. Juho Leinonen, Academy Research Fellow at Aalto University, spoke at UDIT; Øystein Haugen, Professor at Østfold University College, presented at NIK; Björn Þór Jónsson, Professor at Reykjavik University, addressed NOKOBIT; and Patrick Adrianus Bours, Professor at NTNU, provided insights at NISK.

The conference also facilitated various workshops, lightning talks, and poster presentations, including a gathering of the national ICT fagråd. MediaFutures was proud to support the event, with several of its researchers contributing to discussions around AI, media, and data analytics.

Noteworthy papers from MediaFutures' researchers included Professor Duc-Tien Dang-Nguyen's presentation of VeriDash, an AI-driven dashboard designed for enhancing multimedia verification, and Gloria Anne Babile Kasangu, Assistant Professor Alain D. Starke, and Professor Christoph Trattner's research on the impact of image filters on trust in online news. In the field of AI, Bilal Mahmood, Lubos Steskal, and Associate Professor Samia Touileb explored how large language models could assist in editorial decision-making.

Associate Professor Fazle Rabbi and Professor Andreas L. Opdahl discussed the role of AI in news contextualization, while Professor Opdahl also presented on enhancing cybersecurity awareness within Norwegian enterprises. Additionally, Professor Bjørnar Tessem's work on security challenges in fisheries and Khadiga Seddik's exploration of AI's ethical challenges in the media landscape underscored the breadth of MediaFutures' research contributions.

Through these presentations, the conference reinforced MediaFutures' commitment to advancing research in critical areas such as artificial intelligence, cybersecurity, and media trust, promoting a more secure and transparent digital environment.

ACM RECSYS

OCTOBER 14-18

1100 PARTICIPANTS

The ACM RecSys Conference 2024, held in Bari, brought together global experts and researchers focused on advancing recommender systems. MediaFutures was well-represented, with Professor Christoph Trattner, Professor Dietmar Jannach, Assistant Professor Alain Starke, and PhD candidates Anastasiia Klimashevskaia, Ayoub el Majjodi, Bilal Mahmood, and Jia-Hua Jeng actively contributing to the discussions.

A standout moment was Jia-Hua Jeng's participation in the PhD Symposium, where they received valuable feedback and insights from mentors Associate Professor Özlem Özgöbek and Professor Bamshad Mobasher. Jia-Hua shared, *"The PhD symposium was a great experience. I received very helpful feedback and gained great insights from other PhD students' work."*

Bilal Mahmood attended the INRA workshop, engaging with diverse research on news recommender systems. He also expressed gratitude to his supervisors for their support, adding that the experience was enriching.

Anastasiia Klimashevskaia presented her research on news personalization, based on her time at VG in Norway. She highlighted, *"It was great to discuss how we can support editorial teams with news personalization and how this approach can impact editorial decisions."*

Ayoub el Majjodi, serving as the Proceedings Chair, reflected on the conference: *"RecSys 2024 in Bari was a special experience for me, not only as an attendee but also as part of the organizing team."* Ayoub also presented research at the HealthRecSys workshop, receiving positive feedback from the community.

RecSys 2024 in Bari was a fantastic opportunity for collaboration, innovation, and learning, solidifying MediaFutures' role in shaping the future of recommender systems.

From left to right: PhD candidate Ayoub el Majjodi, Prof. Christoph Trattner, Phd candidate Anastasiia Klimashevskaia, Asst. Prof. Alain D. Starke, and Phd candidates Bilal Mahmood and Jia-Hua Jeng

PhD candidate Ayoub el Majjodi

Publications:

Empowering Editors: How Automated Recommendations Support Editorial Article Curation. Klimashevskaia, A., Elahi, M., Jannach, D., Trattner, C. & Buodd, S. INRA Workshop at ACM Recsys 2024, 2024.

Negativity Sells? Using an LLM to Affectively Reframe News Articles in a Recommender System. Jeng, J., Kasangu, G., Starke, A., Knudsen, E. & Trattner, C. INRA Workshop at ACM Recsys 2024, 2024.

Bridging Viewpoints in News with Recommender Systems. Jia-Hua Jeng. ACM RecSys2024, 2024.

ANNUAL MEETING

The MediaFutures Annual Meeting 2024, themed Trust and Usability of Generative AI, was the largest and most impactful conference on media and artificial intelligence ever organized by our Research Centre. Over two days, more than 130 participants gathered at Scandic Ørnen in Bergen to delve into cutting-edge advancements in responsible media technology and innovation. Esteemed keynote speakers from Amazon Web Services and Dataminr headlined the event, joined by representatives from organizations such as BBC Verify, TV 2, Nokia Bell Labs, and Vrije Universiteit Amsterdam, who delivered thought-provoking presentations. The Annual Meeting is the flagship event of our Centre and serves as a platform for researchers and industry representatives to exchange knowledge, foster collaboration, and envision the future of media and AI.

NOVEMBER 14-15

120 PARTICIPANTS

Prof. Christoph Trattner, Centre Leader

Alex Jaimes, Chief AI Officer, Dataminr

The event began with a demo and poster exhibition that showcased pioneering projects from MediaFutures researchers and students. Attendees explored innovations including advanced recommender systems for editors, political news, and streaming platforms; large language model (LLM)-based event extractors; conflict analysis tools for journalists; AI-driven fact-checking; and AI-powered moderation for broadcast political debates. These projects highlighted the creative synergy between MediaFutures and its diverse industry partners, offering a glimpse into the future of AI-driven media experiences. The formal program began with a warm welcome from Siri Gloppen, the new Dean of the Faculty of Social Sciences at the University of Bergen; Christian Birkeland, CTO of TV 2 and Chairman of MediaFutures' Steering Board; and Centre Director Professor Christoph Trattner. Attendees were introduced to a thoughtfully curated program focusing on responsible and trustworthy AI, combating misinformation, and leveraging AI to drive innovation in news media.

Vanessa Murdock, Sr. Science Manager, Amazon Web Services

Watch the recap video here!

Prof. Bjørnar Tessem, Vinay Setty, Sergej Stoppel, Helge O. Svela, Morten Langfeldt Dahlback, Kayleen Devlin

The momentum carried into the second day, beginning with a teaser for John Magnus Dahl's forthcoming book, Making a World with the Smartphone. His postdoctoral research at MediaFutures provides a fresh perspective on how young boys in Bergen engage with smartphones to shape their worldviews through digital technology.

The program continued with a thought-provoking presentation by Dr. Sanja Šćepanović of the prestigious Nokia Bell Labs in Cambridge, who explored responsible AI from design to deployment, emphasizing the critical role of ethics throughout the process. Kayleen Devlin of BBC Verify shared insights on addressing falsehoods in uncertain times, while Lubos Steskal and Chris Ronald Hermansen of TV 2 presented their experimental project KI-Kjetil — a virtual TV anchor avatar used during the U.S. elections. This initiative demonstrated the innovative potential of AI while sparking discussions on its practical implications. The entire event concluded with Professor Damian Trilling from Vrije Universiteit Amsterdam, who discussed responsible recommender systems for news, highlighting the need to balance user engagement with ethical considerations.

Reflecting on the event, Centre Leader Professor Christoph Trattner expressed pride in the collaborative spirit and professional organization of the event.

"After four years of operation, MediaFutures has established itself as a leader in groundbreaking projects with industry partners. This year's Annual Meeting showcased how we combine research-driven innovation and responsibility in media and AI, bringing brilliant minds together to address critical challenges. I am incredibly proud of our team's dedication to making this vision a reality," Trattner said.

The 2024 Annual Meeting highlighted MediaFutures' commitment to driving responsible AI and media technology innovation, solidifying its position as a leading hub for collaboration between academia and industry. We are excited for what the next four years will bring!

Annual Meeting 2025
13th November

SAVE THE DATE!

Kayleen Devlin
BBC Verify

PostDoc John Magnus Dahl

Professor Damian Trilling
Vrije Universiteit Amsterdam

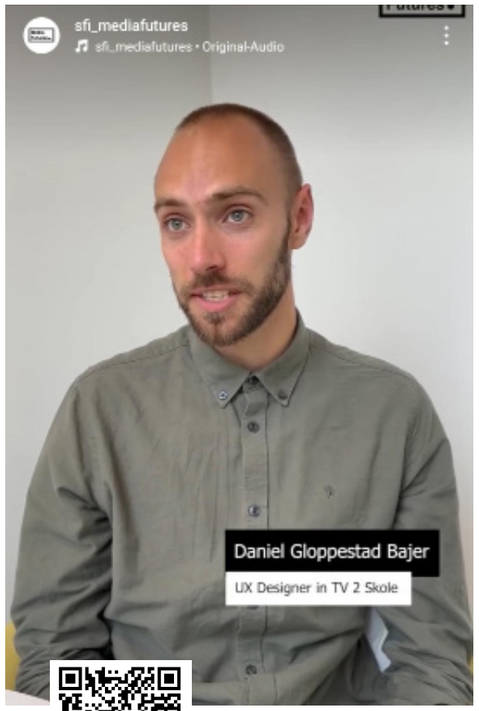
Dr. Sanja Šćepanović, Nokia Bell Labs

COMMUNICATION

In 2024 we invested in new roll ups, posters, mugs, T-shirts and got a lot of media attention in Norway and abroad.

We also have an external newsletter which is sent out once a month and an internal newsletter every other week. In these newsletters, we inform about publications, activities in the work packages, and events to our partners and affiliated people. We have 219 subscribers to our monthly external newsletter, and 100 mail addresses registered for the internal bi-weekly newsletter.

Check out our social media here!



INTERNATIONALISATION & VISITS

State secretary Tomas Norvoll

Innovation workshop with VIS

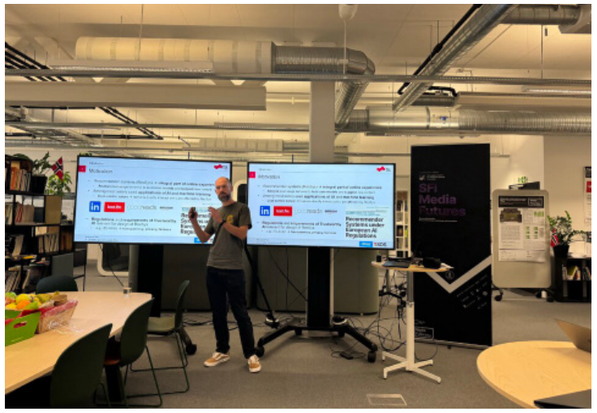
Norges Forskningsråd (Norwegian Research Council)

Visit to BBC/Cardiff University, Wales

Nordic AI delegation from Lund (Sweden), Aalborg (Denmark) and Bergen

Prof. Dr. Natali Helberger (University of Amsterdam)

University of Würzburg



Research Area Manager of FAIR AI group Dr. Dominik Kowald (Know Center, Austria)

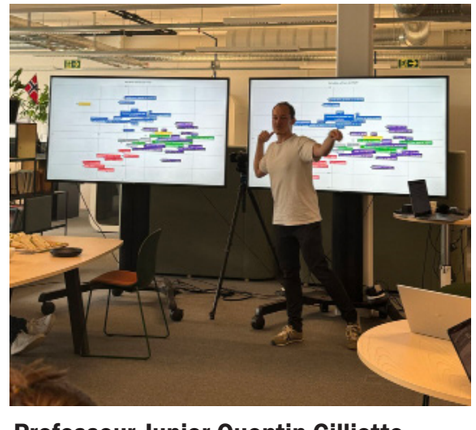
Postdoctoral Research Associate Reshmi Gopalakrishna Pillai (Vrije Universiteit Amsterdam, Netherlands)

Assistant Prof. in Computing Sciences Debora Nozza (Bocconi University, Italy)

Research Associate Dr. Dennis Kotkov (University of Helsinki)

Analyst Ingvild Hjertaas (NRK)

Assistant Professor Ujwal Gadiraju (Delft University of Technology, Netherlands)



Professeur Junior Quentin Gilliotte (Université Panthéon-Assas, France)

STAFF

New Staff

Dr. Adane Nega Tarekegn, Postdoctoral Researcher

Adane joined Work Package 3 in January. He holds a Ph.D. in Modeling and Data Science from the University of Turin. His research interests include machine learning, deep learning, pattern recognition, data science, and analytics.

His research output includes publishing scientific papers in journals and conferences, as well as developing demos and prototypes. During his secondment at TV 2 in 2024, he worked on an AI-driven clipping project to automate video news editing, reducing time and workload for editors and journalists.

Dr. Christopher Senf, Innovation Coordinator

Christopher joined MediaFutures as the Innovation Coordinator in February, working on facilitating responsible innovation at the centre and fostering collaborations between academia and industry. A political philosopher by training, he earned his PhD in 2023 at UiB.

His own research focuses on the ethics and politics of AI, particularly in relation to future conflicts and protests. In 2021, he was a Fulbright Visiting Fellow at the University of Massachusetts Boston. He co-leads the 'Boston-Bergen Forum on Digital Futures,' an international research network involving SFI MediaFutures, UiB, UMass Boston, and MIT.

Peter Røysland Aarnes, PhD candidate

Peter joined Work Package 3 in March. He completed his Bachelor's and Master's in Information Science at the University of Bergen, where his thesis was about experimenting the possible use of Norwegian based language models to improve transcription in speech-to-text transcripts. Peter is highly interested in in-depth research and learning, especially within the field of AI and NLP.

In 2024, he mostly worked with claim detection and researched how robust different LLMs are to counterfactual inputs in claim-evidence pairs.

Svenja Lys Forstner, Research Assistant

Svenja started at MediaFutures in August. She has a Bachelor's degree in Media Design Computing from Hochschule Hannover, Germany, and a Master's degree in Media and Interaction Design from the University of Bergen. She has a strong interest in Digital Accessibility, which she also did her master project on.

In 2024, she joined the Reynir Project, working together with her supervisors, Prof. Christoph Trattner and Asst. Prof. Alain Starke, as well as Assoc. Prof. Erik Knudsen, on a large-scale user study examining trust related to image labels in news articles. She also contributed to two Demos for the Annual Meeting.

Tobias Jovall Wessel, Research Assistant

Tobias joined MediaFutures in August. He holds a Bachelor's degree in Information Science from the University of Bergen and has a general passion for technology.

He began his career at MediaFutures by tending to various aspects of the Centre's technical infrastructure. He also played a key role in securing a partnership with and implementing the Newscatcher API, a service now used to provide real-time news to several prototypes at the Centre. Toward the end of the year, he contributed to various administrative tasks, such as organizing the Centre's Annual Meeting.

Jiajing Wan, PhD candidate

Jiajing joined Work Package 5 in October. She holds a MSc in IT & Cognition from the University of Copenhagen, Denmark, and a BEng in Intelligence Science and Technology from Sun Yat-sen University, China. Her previous work included exploring personalised news headline generation and investigating methods to counter misinformation on social media platforms.

These experiences have equipped her with valuable skills and knowledge, particularly in applying language technology to create more fair and personalised AI systems.

From Research Assistant to Backend Developer at TV 2

Snorre Alvsvåg, a Master's graduate in Information Science from Sotra, has built an impressive career path. Starting as a research assistant at SFI MediaFutures in 2021, he moved up to a full-time developer position at Norway's commercial public service broadcaster TV 2 in only three years.

Back in 2021, Alvsvåg laid the technical groundwork of SFI MediaFutures under the guidance of Centre Leader Christoph Trattner. His responsibilities ranged from managing GitHub repositories to setting up demo walls, all while facilitating seamless communication with partners. *"I established also the cloud infrastructure and systems for data sharing with our user partners"*, Snorre recalls.

His role at MediaFutures brought him into regular contact with industry partners, including TV 2. Initially focusing on data transfer and communication, Snorre soon found himself immersed in the world of recommender systems through collaborative projects with for example PhD student Anastasiia Klimashevskaia.

A Hybrid Solution for TV 2 Play's Recommender System

After completing his Bachelor's degree in Information Science, Snorre pursued a Master's degree, impressively writing his thesis in just one month. In his thesis, *"Addressing the Next-Poster Problem: A Hybrid Recommender System for Streaming Platforms"*, he explored the combination of Collaborative Filtering (CF) and Sequence Aware approaches for TV 2 Play's recommender system. Snorre identified a common shortfall in traditional recommender systems: They often overlook the significance of recently watched content, which he termed the "next-poster problem."

"Through an online evaluation on TV 2 Play, I demonstrated that using a Hybrid approach to address the next-poster problem results in a decrease in user engagement metrics like click-through rate (CTR) but an increase in meaningful clicks, leading to higher user satisfaction," Snorre writes.

In essence, Snorre adapted the Sequence Aware approach, typically used in music recommendation, to movie recommendations and integrated it with the CF method. In the Sequence Aware approach, the order of content consumption is crucial. A user's "click history" reveals patterns in behavior, which is especially important when data is sparse. Unlike CF, which requires data from multiple users to find similarities, the Sequence Aware approach can operate with data from just one user.

Snorre Alvsvåg

Collaborative Filtering (CF) works on the principle that users who have had similar preferences in the past will continue to do so. This method identifies similarities between users based on their previous likes.

Snorre's objective was to test the effectiveness of a recommender system that considered recent user behavior, finding that it often led to higher user satisfaction. He conducted offline evaluations to select the best model and followed up with online evaluations to assess performance.

Snorre received significant support from MediaFutures partners Lars Skjærven and Astrid Tessem in coding and dataset mining, respectively. Early access to TV 2 data and academic guidance from co-authors Assistant Professor Alain Starke and Professor Christoph Trattner were also crucial to his research.

Transitioning to TV 2

Through his work in MediaFutures, Snorre encountered several of the industry partners, one of these being TV 2. For him TV 2 was the place to aim for as it was the only company working on recommender systems for movies, and not just news.

After originally applying for a job as a Data scientist, he ended up with a successfull job interview for the position of a Backend Developer. Whilst this engagement was meant to be a full time job, Snorre still needed to finish his master, and therefore began working part-time at TV 2.

"I could not work full time in the beginning, but it was definitely an advantage to write about and with an industry partner which I also work for."

By that he could test his theory from the thesis directly in TV 2 Play for ten days. *"The goal is to continue working on this project at TV 2,"* he says.

Reflecting on his journey, Snorre acknowledges the unique opportunity to interact with the industry early in his career.

"MediaFutures was my entry point to a 50% position at TV 2. Being hired that early is uncommon. I believe that the ability to engage with the industry was beneficial."

Now, Snorre is contemplating pursuing a PhD within the industry, leveraging his experience and research to continue contributing to advancements in recommender systems.

In summary, Snorre Alvsvåg's journey from MediaFutures to TV 2 exemplifies the seamless integration of academic research and industry application, underscoring the potential for innovation in recommender systems within the domain of streaming platforms.

Snorre about his career. Watch the full interview

Centre Management

Name	Affiliation	Additional Information
Christoph Trattner	UiB	Centre Director
Anne Nielsen	UiB	Administrative Coordinator
Janina Wildermuth	UiB	Communication Officer
Håkon Mollestad/Bjørn Norem	UiB	Financial Officer
Christopher Senf	UiB	Innovation Coordinator

Researcher

Name	Affiliation	Additional Information
Erik Knudsen	UiB	WP1-leader, Associate Professor
Christoph Trattner	UiB	WP2-leader, Professor
Mehdi Elahi	UiB	WP2-leader, Professor
Bjørnar Tessem	UiB	WP3-leader, Professor
Andreas Lothe Opdahl	UiB	WP3, Professor
Duc-Tien Dang Nguyen	UiB	WP3, Professor
Vinay Setty	UiS	WP3, Associate Professor
Fazle Rabbi	UiB	WP3, Associate Professor
Morten Fjeld	UiB	WP4-leader, Professor
Frode Guribye	UiB	WP4, Professor
Koenrad de Smedt	UiB	WP5-leader, Professor
Erik Velldal	UiO	WP5, Professor
Samia Touileb	UiB	WP5-leader, Associate Professor
Lilja Øvrelid	UiO	WP5-leader, Professor
Helle Sjøvaag	UiS	WP2, Professor
Dietmar Jannach	Universität Klagenfurt	WP2, Professor II
Alain Starke	University of Amsterdam	WP2, Assistant Professor
Enrico Motta	Open University, UK	WP3, Professor
Oskar Juhlin	Stockholms Universitet	Work Package Advisory Group, Professor

Industry Partners

Name	Affiliation	Additional Information
Siri Øyen Larsen	Amedia	WP2, Senior Data Scientist
Erik Bonesvoll	Amedia	WP2, Director of Development
Sigve Dypdahl Haranger	Amedia	WP2, WP4, ML Engineer
Igor Pipkin	Amedia	WP2, PhD, Chief Data Scientist
Emiliano Guevara	Amedia	WP5, Senior Data Scientist
Thomas Husken	BT	WP2, Data Scientist
Lasse Lambrechts	BT	WP3, Data Journalist, Head of AI
Magnus Helgesen	BT	WP4, UX Lead BT News
Jan Stian Vold	BT	WP4, Editorial Development
Morten Langfeldt Dahlback	Faktisk.no	WP3, Head of Innovation and Technology

Yngvar Nordberg	TV 2 Skole AS	CEO
Gunnhild Aasprang	TV 2 Skole AS	Editor-In-Chief
Siv Dalbakk	TV 2 Skole AS	Editor
Daniel Gloppestad Bajer	TV 2 Skole AS	UX-Designer
Sigve Resaland	TV 2 Skole AS	UX-Designer
Linnea Ottem-Holmsten	TV 2 Skole AS	
Sebastian Møst	TV 2 Skole AS	
Fiona Sand	TV 2 Skole AS	
Torbjørn Sæterbø (innleid)	TV 2 Skole AS	
Siv-Anne Heggheim Nesse	TV 2 Skole AS	
Emil Moore Carlsen	TV 2 Skole AS	
Thea Løkebø	TV 2 Skole AS	
Christian Birkeland	TV 2 AS	Executive Director
Arne Klein	TV 2 AS	Head of Architecture and Development
Mads Herteig	TV 2 AS	Teach Lead
Sina Tenold	TV 2 AS	Developer
Kristian von Streng Hæhre	TV 2 AS	AI Software Engineer
Silje Hallem	TV 2 AS	Attorney
Tormod Tønnesen	TV 2 AS	Team Lead
Alexander Arnesen	TV 2 AS	Developer, Android Specialist
Inger-Marie Nilsen	TV 2 AS	Technical Lead Web
Tobias Lie Andersen	TV 2 AS	Senior app developer and tech-lead
Snorre Alvsvåg	TV 2 AS	WP2, Back-end Developer
Lars Skjærven	TV 2 AS	WP2, Senior Data Scientist
Are Tverberg	TV 2 AS	WP3, Senior Advisor
Lubos Steskal	TV 2	WP3, WP4, WP5, Senior Data Scientist
Astrid Tessem	TV 2	WP2, Data Scientist
Eirik Blackstad	Wolftech	Lead Software Developer
Irena Glut-Gjengsto	Wolftech	UX Lead
Adrian Almenningen	Wolftech	Lead Backend Developer
Eivind Gjersten	Wolftech	System Developer
Gregory Dent	Wolftech	Vice President of Technology
Sergej Stoppel	Wolftech	WP3, WP4, PhD, Chief Innovation Officer
Petter Ole Jakobsen	VIZRT	WP4 , CTO
Torbjørn Bøen	VIZRT	WP4, R&D Manager
Magnus Breder Birkenes	Nasjonalbiblioteket	WP5, Researcher
Iacob Prebensen	NRK	WP1, Audience Research
Kristian Tolonen	NRK	WP1, Head of Audience Research
Pablo Antonio Vidales Calderon	Schibsted Media	WP1, WP2, WP3, WP4, WP5, PhD, Head of Product for Data and AI

Juan Carlos Lopez Calvet	Schibsted Media	Director of Data & AI
Saikiran Tharimena	Schibsted Media	Transformative AI & Data Specialist
Simon Eide	Schibsted Media	AI Lead
Eivind Throndsen	Schibsted Media	Research Coordinator
Magnus Jensen	Schibsted Media	Head of AI Development
Birgitte Kvammen	NRK	Head of IT shared systems and support
Anders Hofseth	NRK	WP1, Journalist and strategic analyst at NRK
Ingar Arntzen	NORCE	WP4, Senior Researcher
Nabil Belbachir	NORCE	WP4, Research Director
Kristoffer Tangrand	NORCE	WP4, Senior Researcher
Ingar Mæhlum Arntzen	NORCE	WP4, Senior Researcher
Silje Førsund	Faktisk.no	WP3, Journalist and subject matter expert for verification
Kajsa Garmann Lønrusten	Faktisk.no	WP3, Journalist
Olav Østrem	Faktisk.no	WP3, News Editor
Sofie Svanes Flem	Faktisk.no	WP3, Journalist

Advisory Committee

Name	Affiliation	Additional Information
Sinan Kayhan Aral	MIT	Professor
Nicholas Diakopoulos	Northwestern University	Professor
David Caroll	The New School's Parsons School of Design	Associate Professor
John Ellis	Royal Holloway University of London	Professor
Deborah Estrin	Cornell Tech University	Professor
Luciano Floridi	Yale University	Professor
Hans Hoffmann	The European Broadcasting Union – EBU	Head of the unit on Media Fundamentals and Production technology
Dietmar Jannach	Universität Klagenfurt	Professor II
Oskar Juhlin	Stockholms Universitet	Professor
Irene Costera Meijer	Vrije Universiteit Amsterdam	Professor
Enrico Motta	The Open University	Professor
Alexandre Rouxel	The European Broadcasting Union – EBU	Data Scientist and Project Coordinator

Steering Board

Name	Affiliation	Additional Information
Christian Birkeland	TV 2	Chief Digital Officer
Jan Stian Vold	BT	Editorial Development
Nabil Belbachir	NORCE	Research Director
Øystein Lund Bø	UiS	Dean
Turid Borgen	UiS	Associate Professor, Dean
Jan Erik Askildsen/ Siri Gloppen	UiB	Dean
Morten Langfeldt Dahlback	Faktisk.no	Head of Innovation and Technology
Juan Carlos Lopez Calvet	Schibsted Media	Director of Data & AI
Erik Bonesvoll	Amedia	Director of Development
Igor Pipkin	Amedia	PhD, Chief Data Scientist
Pål Nedregotten	NRK	Director of Technology
Sergej Stoppel	Wolftech	PhD, Chief Innovation Officer
Hege Stensrud Høsøien	National library	Director of Department for Academic Affairs and Research
Stephen Oepen	UiO	Professor
Torbjørn Bøen	Vizrt	R&D Manager
Tor Lunde Larsen	Norwegian Research Council (Observer to the Steering Board)	Senior Council

Research Assistants

Name	Affiliation	Additional Information
Gloria Anne Babile Kasangu	UiB	WP2, Admin
Anders Sandvik Bremnes	UiB	WP2, Admin
Svenja Lys Forstner	UiB	WP2, Admin
Tobias Jovall Wessel	UiB	WP2, Admin
Farhad Vadiee	UiB	WP2
Luca Fossen	UiB	WP2
Stephanie Portales	UiB	WP4
Andreas A. Tjeldflaat	UiB	WP4
Lidvard Sandven	UiB	WP5
Mariel Kroka	UiB	WP5
Daniel Rosnes	UiB	WP2, Admin
Zoia Butenko	UiO	WP5
Elisabeth Øverbø	UiO	WP5
Nora Elise Haugen	UiO	WP5
Fredrik Opstad Fridstrøm	UiO	WP5

Postdoctoral researchers with financial support from the Centre budget

Name	Affiliation	Additional Information
John Magnus Ragnhildson Dahl	UiB	WP1
Adane Tarekegn	UiB	WP3

PhD students working on projects in the centre with financial support from the Centre budget

Name	Affiliation	Additional Information
Bilal Mahmood	UiB	WP2
Marianne Borchgrevink-Brækhus	UiB	WP1
Pete Daniel Andrews	UiB	WP4
Huiling You	UiO	WP5
Anastasiia Klimashevskaia	UiB	WP2
Sohail Ahmed Khan	UiB	WP3
Jiajing Wan	UiB	WP5
Peter Røysland Aarnes	UiS	WP3

PhD students working on projects in the centre with financial support from other sources

Name	Affiliation	Additional Information
Ayoub El Majjodi	UiB	WP2
Khadiga Seddik	UiB	WP2
Jia-Hua Jeng	UiB	WP2
Oda Elise Nordberg	UiB	WP4
Bahareh Fatemi	UiB	WP3

Master Students

Years	Name	Thesis Title
2022 - 2024	Vanessa Marie Haaland	Personalized Advertisement Recommendations Using Implicit Feedback
2022 - 2024	Agnar Haugbjørg Haugen	Exploring Political Engagement and Communication in Twitch Chat: A UserCentric Perspective
2022 - 2024	Andreas Solberg Jensen	Plattformisering og lytterlojalitet hos norske underholdningspodkaster
2022 - 2024	Thomas Låg	Large-scale Evaluation of Context-Aware Recommender Systems in Media Domain
2021 - 2024	Kristoffer André Johannes Blücher	IBM Watson Debater og Chat GTP som støtteverktøy for journalistikk
2022 - 2024	Roald André Kvarv	Bruk av generative språkmodeller til å trekke ut geografisk informasjon om hendelser
2022 - 2024	Aleksander Nordli	Managing Privacy in Knowledge Graphs
2022 - 2024	Bjørn-André Svellingen	Blackboard Model for Rich Text Annotation
2022 - 2024	Kristian Hagen Risberg	Smid utvikling innen mediesektoren
2022 - 2024	Sindre Soltvedt Bjørndal-Riis	Gendered named entity recognition for Amedia's user-base analysis
2022 - 2024	Trygve Thorland	Large language models for document classification
2022 - 2024	Magnus Erlandsen	Bruk av ChatGPT for klassifisering av byggesaksdokumenter: En studie i prompt engineering
2022 - 2024	Snorre Alsvåg	Addressing the Next-Poster Problem: A Hybrid Recommender System for Streaming Platforms
2022 - 2024	Jonas Taule Nordli	VR Memory Palaces: Can Walking Improve Memorization?
2022 - 2024	Peter Måseidvåg	Virtual Reality as a collaborative technology to support decision making in remote collaboration
2022 - 2024	Helene Bulko	Stand-up, cancel culture og medienes rolle
2023 - 2025	Atle Espenes	Antonsen-saken og polarisering i norsk nettdebatt
2019 - 2025	Jonas Bech Holtan	Nudging Towards Healthy Food Choices: Exploring the Power of Attractive Images over Deep Learning-based Food Recommender Systems
2024 - 2025	Snorre Åldstedt	Investigating and Measuring Bias in Generative Language Models
2024 - 2025	Ingunn Statle Nævdal	Personalised News Summarization
2024 - 2025	Martin Salterød Sjåvik	Bias in Large Language Models
2024 - 2025	Tord Berget Monclair	News Recommendation based on Incorporation of User Behaviors and News Data
2024 - 2025	Bjørn Kjartansson Mørch	Analysis of Popularity Bias Effect in Media Recommendation
2024 - 2025	Thorstein Lium Fougner	Context-aware Recommender Systems in Media Domain
2024 - 2025	Jørgen Eknes-Riple	Using a Large Language model to present persoalised headlines in news recommender systems
2024 - 2025	Beatrix Chik Wu	News Report Adaption for Synthetic Voice Presentation
2024 - 2025	Jan Malte Brunner	Cheapfake and Deepfake Media Detection Using Transformers
2024 - 2025	Sindre Sæter	Image and Video Metadata Analysis

PUBLICATIONS

Journal Papers

Alain D. Starke; Martijn C. Willemsen: Psychologically Informed Design of Energy Recommender Systems: Are Nudges Still Effective in Tailored Choice Environments?. In: Ferwerda, B., Graus, M., Germanakos, P., Tkalčič, M. (eds) A Human-Centered Perspective of Intelligent Personalized Environments and Systems. Human–Computer Interaction Series. Springer, Cham.

Alain D. Starke; Vegard R. Solberg; Sebastian Øverhaug Larsen; Christoph Trattner. Examining the Merits of Feature-specific Similarity Functions in the News Domain using Human Judgments. In: User Modeling and User-Adapted Interaction, 2024.

Anastasiia Klimashevskaia; Dietmar Jannach; Mehdi Elahi; Christoph Trattner. A Survey on Popularity Bias in Recommender Systems. In: User Modeling and User-Adapted Interaction (UMUAI), 2024.

Andreas L. Opdahl; Natali Helberger; Nicholas Diakopoulos. Guest Editorial: AI and the news. In: AI Magazine, 2024.

Ingar M Arntzen; Njål Borch; Anders Andersen. Control-driven Media. A unifying model for consistent, cross-platform multimedia experiences. In: FTC 2024 International Journal of Advanced Computer Science and Applications (IJACSA), 2024.

Maria Soledad Pera; Federica Cena; Monica Landoni; Cataldo Musto; Alain D. Starke: Human Factors in User Modeling for Intelligent Systems. –Computer Interaction Series. Springer Nature Switzerland AG 2024. B. Ferwerda et al. (eds.).

Marianne Borchgrevink-Brækhus. Understanding news experience: The resonance between content, practices, and situatedness in everyday life. In: Journalism, 2024.

Nicholas Diakopoulos; Christoph Trattner; Dietmar Jannach; Irene Costera Meijer; Enrico Motta. Leveraging Professional Ethics for Responsible AI: Applying AI techniques to journalism. In: Communications of the ACM, 2024.

Peder Haugfos; John Magnus Ragnhildson Dahl; Jan Kratzer; Ines Wolf. Branding or visual storytelling? How legacy media use visual journalism to reach young people in the age of digitalization. In: Journal of Applied Journalism & Media Studies, pp. 1-24, 2024.

Sohail Ahmed Khan; Laurence Dierickx; Jan-Gunnar Furuly; Henrik Brattli Vold; Rano Tahseen; Carl-Gustav Linden; Duc-Tien Dang-Nguyen. Debunking War Information Disorder: A Case Study in Assessing the Use of Multimedia Verification Tools. In: Journal of the Association for Information Science and Technology, 2024.

Published Conference Papers

Aida Ashrafi; Bjørnar Tessem; Katja Enberg. Analysing Unlabeled Data with Randomness and Noise: The Case of Fishery Catch Reports. 14th Scandinavian Conference on Artificial Intelligence SCAI 2024, 2024.

Alain D. Starke; Anders Sandvik Bremnes; Erik Knudsen; Damian Trilling; Christoph Trattner. Perception versus Reality: Evaluating User Awareness of Political Selective Exposure in News Recommender Systems. ACM UMAP 2024, 2024.

Bilal Mahmood; Mehdi Elahi; Samia Touileb; Lubos Steskal. Can Large Language Models Support Editors Pick Related News Articles? NIKT 2024, 2024.

Bilal Mahmood; Mehdi Elahi; Samia Touileb; Lubos Steskal; Christoph Trattner. Incorporating Editorial Feedback in the Evaluation of News Recommender Systems. ACM UMAP 2024, 2024.

Daniel Rosnes; Alain Starke; Christoph Trattner. Shaping the Future of Content-based News Recommenders: Insights from Evaluating Feature-Specific Similarity Metrics. ACM UMAP '24, 2024.

Fazle Rabbi. A Model-Based Framework for Exploring Conflict Dynamics. Proceedings of the ACM/IEEE 27th International Conference on Model Driven Engineering Languages and Systems.

Jia Hua Jeng. Bridging Viewpoints in News with Recommender Systems. ACM RecSys2024, 2024.

Jia Hua Jeng; Gloria Anne Babile Kasangu; Alain D. Starke; Christoph Trattner. Emotional Reframing of Economic News using a Large Language Model. ACM UMAP 2024, 2024.

Khadiga Seddik. Exploring the Ethical Challenges of AI and Recommender Systems in the Democratic Public Sphere. NIKT, 2024.

Peter Andrews; Oda Elise Nordberg; Frode Guribye; Kazuyuki Fujita; Morten Fjeld; Njål Borch. AiCommentator: A Multimodal Conversational Agent for Embedded Visualization in Football Viewing. Intelligent User Interfaces (IUI), 2024.

Peter Andrews; Oda Elise Nordberg; Frode Guribye; Morten Fjeld; Njål Borch. Designing for Automated Sports Commentary Systems. IMX'24, 2024.

Peter Andrews; Njål Borch; Morten Fjeld. FootyVision: Multi-Object Tracking, Localisation, and Augmentation of Players and Ball in Football Video. ACM ICMIP, 2024.

Peter Røysland Aarnes; Vinay Setty; Petra Galuščáková. IAI Group at CheckThat! 2024: Transformer Models and Data Augmentation for Checkworthy Claim Detection. Conference and Labs of the Evaluation Forum, 2024.

Samia Touileb; Jeanett Murstad; Petter Mæhlum; Lubos Steskal; Lilja Charlotte Storset; Huiling You; Lilja Øvrelid. EDEN: A Dataset for Event Detection in Norwegian News. LREC-COLING 2024, 2024.

Sohail Ahmed Khan; Duc-Tien Dang-Nguyen. CLIPping the Deception: Adapting Vision-Language Models for Universal Deepfake Detection. ACM International Conference on Multimedia Retrieval (ICMR), 2024.

Étienne Simon; Helene Olsen; Huiling You; Samia Touileb; Lilja Øvrelid; Erik Velldal. Generative Approaches to Event Extraction: Survey and Outlook Proceedings. 2024.

Duc-Tien Dang-Nguyen; Sohail Ahmed Khan; Michael Riegler; Pål Halvorsen; Anh-Duy Tran; Minh-Son Dao; Minh-Triet Tran. Overview of the Grand Challenge on Detecting Cheapfakes. In: Proceedings of the 2024 International Conference on Multimedia Retrieval (ICMR'24), 2024.

Jo Dugstad Wake; Frode Guribye. Avoiding "metal astray": experience evaluation of virtual reality training for melting furnace operators. In: Proceedings of the 21st ISCRAM Conference, 2024.

Johannes Kruse; Lien Michiels; Alain D. Starke; Nava Tintarev; Sanne Vrijenhoek. NORMalize: A Tutorial on the Normative Design and Evaluation of Information Access Systems. In: CHIIR '24: Proceedings of the 2024 ACM SIGIR Conference on Human Information Interaction and Retrieval , 2024.

Sanne Vrijenhoek; Lien Michiels; Johannes Kruse; Alain Starke; Jordi Viader Guerrero; Nava Tintarev. Report on NORMalize: The First Workshop on the Normative Design and Evaluation of Recommender Systems. In: 2024.

Workshop Papers and Book Chapters

Anastasiia Klimashevskaia; Mehdi Elahi; Dietmar Jannach; Christoph Trattner; Simen Buodd. Empowering Editors: How Automated Recommendations Support Editorial Article Curation. RecSys 2024, INRA workshop, 2024.

Bilal Mahmood; Mehdi Elahi; Fahrhad Vadiee; Samia Touileb; Lubos Steskal. A Supervised Machine Learning Approach for Supporting Editorial Article Selection. 2024.

Jia Hua Jeng; Gloria Anne Babile Kasangu; Alain D. Starke; Erik Knudsen; Christoph Trattner. Negativity Sells? Using an LLM to Affectively Reframe News Articles in a Recommender System Workshop. 2024.

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ACCOUNTS

COSTS PER PARTNER PER YEAR (IN NOK 1,000)	2024
Universitet i Bergen	20 582
Universitet i Oslo	1 317
Universitet i Stavanger	1 551
TV 2 AS	1 048
Norsk Rikskringkasting AS	66
Nasjonalbiblioteket	89
Schibsted ASA / Schibsted Media AS	1 594
Vizrt Norway AS	22
Wolftech Broadcast Solutions AS	341
Bergens Tidende AS	438
Amedia AS	476
NORCE Norwegian Research Centre AS	619
Faktisk.no AS	113
SUM	28 256

FUNDING SOURCES (IN NOK 1,000)	2024
Own contribution	12 758
Private funding	4 098
Research Council of Norway	11 400
SUM	28 256

	IN MNOK
Total budget of MediaFutures	**275**
Funding from Research Council of Norway	**96**
Industry funding	**73**
Research partners' in-kind contribution	**119**

CHRISTOPH TRATTNER, CHRISTOPHER SENF, ANNE MARTHE MERY NIELSEN, BJØRN OVE NOREM, JANINA WILDERMUTH, GLORIA ANNE BABILE KASANGU, SVENJA LYS FORSTNER, TOBIAS JOVALL WESSEL, CHRISTIAN BIRKELAND, NABIL BELBACHIR, SIRI GLOPPEN, ØYSTEIN LUND BØ, JUAN CARLOS LOPEZ CALVET, JAN STIAN VOLD, MORTEN LANGFELDT DAHLBACK, ERIK BONESVOLL, OLE CHRISTIAN LINGJÆRDE, PÅL NEDREGOTTEN, SERGEJ STOPPEL, HEGE STENSRUD HØSØIEN, TORBJØRN BØEN, TOR LUNDE LARSEN, SINAN KAYHAN ARAL, NICHOLAS DIAKOPOULOS, DAVID CARROLL, JOHN ELLIS, DEBORAH ESTRIN, LUCIANO FLORIDI, HANS HOFFMANN, DIETMAR JANNACH, OSKAR JUHLIN, IRENE COSTERA MEIJER, ENRICO MOTTA, ALEXANDRE ROUXEL, ERIK KNUDSEN, KRISTIAN TOLONEN, MARIANNE BORCHGREVINK-BRÆKHUS, MEHDI ELAHI, ASTRID TESSEM, SNORRE ALVSVÅG, ALAIN STARKE, ANASTASIIA KLIMASHEVSKAIA, JIA-HUA JENG, BILAL MAHMOOD, AYOUB EL MAJJODI, KHADIGA SEDDIK, LARS SKJÆRVEN, BJØRNAR TESSEM, FAZLE RABBI, PABLO ANTONIO VIDALES, ANDREAS LOTHE OPDAHL, VINAY SETTY, SOHAIL AHMED KHAN, YNGVE LAMO, BAHAREH FATEMI, PETER RØYSLAND AARNES, ADANE TAREKEGN, LASSE LAMBRECHTS, ARE TVERBERG, MORTEN FJELD, KRISTOFFER TANGRAND, NJÅL BORCH, INGAR MÆHLUM ARNTZEN, FRODE GURIBYE, LUBOS STESKAL, MAGNUS HELGESEN, PETER ANDREWS, YUKI ONISHI, ODA ELISE NORDBERG, LILJA ØVRELID, SAMIA TOUILEB, ERIK VELLDAL, EMILIANO GUEVARA, HUILING YOU, MAGNUS BREDER BIRKENES, JIAJING WAN, FLORENCE JANE WALKER, ANDERS SANDVIK BREMNES, DANIEL ROSNES, FARHAD VADIEE, LUCA FOSSEN, STEPHANIE PORTALES, ANDREAS A. TJELDFLAAT, LIDVARD SANDVEN, MARIEL KROKA, ZOIA BUTENKO, ELISABETH ØVERBØ, NORA ELISE HAUGEN, FREDRIK OPSTAD FRIDSTRØM, JOHN MAGNUS RAGNHILDSON DAHL, ODA ELISE NORDBERG, HÅKON MARCOS JØNTVEDT MOLLESTAD

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