

Context-awareness in media recommendations

A masters thesis by Thomas Låg supervised by Mehdi Elahi, Astrid Tessem and Lars Skjærven in collaboration with UiB and TV2

Media Futures

Abstract

Media recommender systems have been around for a while, however not all reach perfection. More factors can be taken into account, and better architecture can be built. This masters thesis aims to build an enhanced media recommender system by utilising contextual factors. Our viewing preferences, whether we're aware of it or not, may vary greatly depending on these. Prime examples of factors that I will explore are time of day, time of week, viewing device and the recency of user data. Potential questions here could be what types of media should be recommended for a user streaming content on their phone on a week day, and what content should be recommended to a user watching on their big screen on Friday night? In what contexts are users more likely to want to try out new genres? And when do they want their trusty old favorites? Using the latest research and carefully building a highly customised system, I aim to create the perfect fit for the platform I work with and to provide valuable research in the field of context-aware recommender systems.



Method

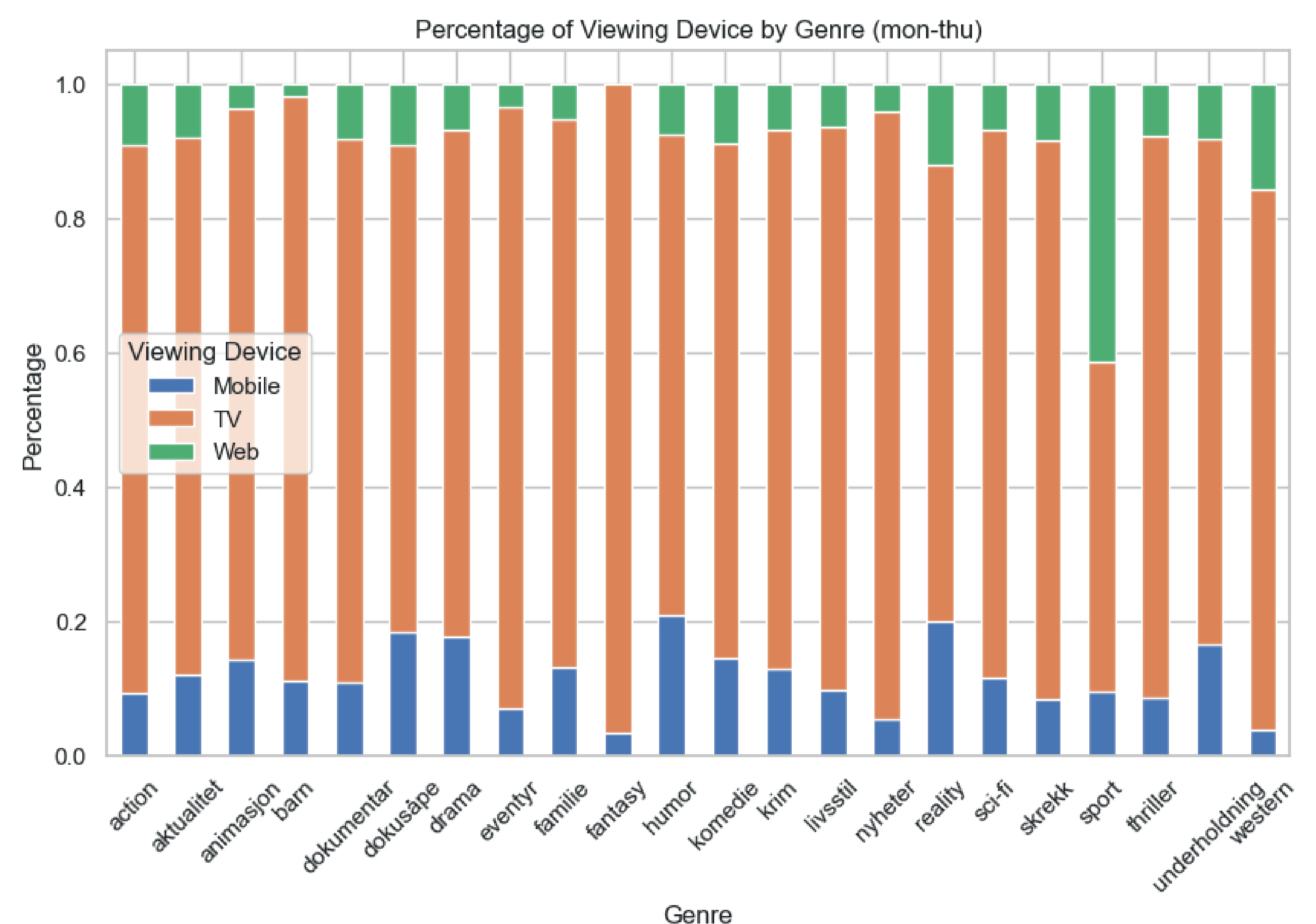
This thesis work is conducted in collaboration with TV 2, one of the industry partners of MediaFutures. They have provided user data and domain knowledge that has proved itself invaluable already in the early phase of the thesis work. By exploring this data, insights were found that are indicative of the importance of contextual factors for generating relevant recommendations for users.

I plan to develop a technique that can generate different recommendations based on contextual factors, and load the most relevant set of recommendations based on factors like time and viewing device. I also want to incorporate a weighting mechanism so that the most recent viewing history has the most impact on the generated recommendations.

I plan to conduct evaluation using common methodologies such as offline evaluation and A/B testing. This means a portion of users will receive the current collaborative filtering algorithm whilst another portion will receive my implementation. I will then analyse and compare the results, which are expected to show an improvement in the quality of recommendation.

Research questions

1. In media streaming platforms, which contextual factors can enrich users' profiles most favorably for generating recommendations?
2. How can the models adopted for generating recommendations in media streaming platforms be enhanced by contextual factors?



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