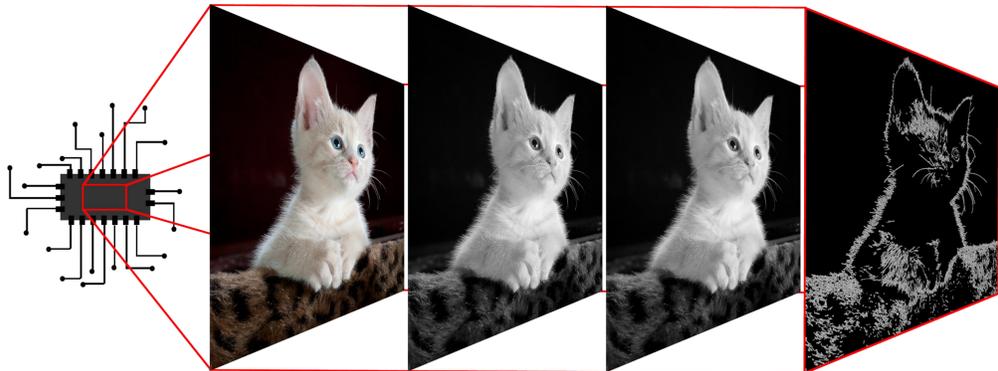


# Visual analysis, recommendation and personalization

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## Abstract

Personalization has become a big part of the internet, which has achieved largely using Recommender Systems. Personalization approaches exploit data from audience (e.g., audience clicks, ratings, etc.) and items (e.g., movie actors, directors, etc.) to create a personalized form of recommendation. Personalization can be employed in many application domains including media domain (video domain, news domain, and photo-sharing domain). Research on personalization has been more focused on editorial content, whereas there are huge potential in advertising - due to extreme richness of offering and demand. In this project, the primary focus will be on Personalization of the media content utilized for advertisement in news applications.

Advertisement is often one of the main ways a company can finance and profit off their product but is sometime viewed as a negative aspect of their product. The negative aspect of advertisement is that it has become spam and we are bombarded with irrelevant and unnecessary information, which affects both audience and industry negatively. The challenge is how to improve fairness and quality when building a balance between the experience of audience and the finances of business. The solution to this problem can be building a responsible personalization through contextualization of the provided media by considering factors such as time, location, and the context of a news article. All factors can be exploited by a system to create a more appropriate experience for the audience.



Dominant Color Detection

Understanding the factors behind fair advertisement is essential for building a responsible personalization. An example approach can be using computer vision technology to extract the visual features from the advertised media and use them to better model the content within advertised media to better filter out irrelevant content. Hence, overall aim of this project is building a responsible personalization of advertisement for both audience and industry with the use of contextualization.

## Research question

1. What correlation can we make from visual features, contextual information and audience interaction?
2. Can these correlation help to create fair personalization for both audience and industry?

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Edge Detection

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