Master (or Bachelor*) Thesis

News and Social Media Content Contextualization to Support the Democratic Discourse and Opinion Making

Project Abstract

Since the last few years, our societies have tended to polarize. People feel their interests are poorly represented by their governments, they lose trust in the democratic system and institutions, and an overall misperception spreads on current societal issues.
One component that fosters this development is how we consume and exchange information on social media. Modern news and social media portals leverage people's desire for simple and emotional messages to show them contents that catch them especially well, increasing their platform usage. This leads to a distorted perception of the reality, enforce one's opinion filter bubble which leads to polarization and distorted public opinion making.

In this project, we want to find and evaluate ways to contextualize social media news posts to spark openness to and tolerance for other opinions. This should foster a productive public discourse - an essential characteristic of a working democratic society.
By adding neutral, related contextual facts that illustrate the message of a news post, its polarizing effect on an offensive headline may be mitigated. Furthermore, a triggered conversation about other present perspectives could improve participants' openness to other opinions. Through a concept of augmenting posts, instead of downtoning or replacing them, the posts do not lose attractiveness to the audience, whereby the concept might be well-applicable in practice, not opposing the social media portal's business interest.

To realize this, I envision different potential technologies. A thesis is supposed to focus on only one of these, depending on your interests. All interaction technologies might rely on a large language model, in order to flexibly deal with user-generated contents in the wild.
Conversational Agents. Chatbots can be realize in various form factors, e.g., assistants on desktop computers, browser plugin, tangible interfaces on the user's desk, or companion on smart mobile devices. The conversational interaction style enables a natural and very flexible interaction and could accommodate various user desires. Through a proactive or reactive affordibility

systems could either guide their users actively, or wait for their self-initiated requests.

Public Displays. Public displays, present e.g. in subway stations or university buildings, display information to a diverse set of people who walks by. Their strength and advantage is that they reach a very broad audience (depending on their location), without requiring people to actively seek for the information / interaction. Furthermore, deployed in waiting areas, they can reach people in opportune moments where they have time to watch and interact. This differentiates them from the other technologies, which in contrast require active installation and a pre-given interest in using it.

Possible Steps and Aims of This Thesis

Literature Research: Research in other related fields, such as communication sciences and sociology, must be reviewed to inform our design. These fields suggested which changes need to be achieved but rarely implemented and evaluated them in the wild. Also, the state of research in HCI, i.e., which similar approaches yet exist, needs to be worked out.

Concept Development: Based on the compiled research, you define a concept you want to realize from the interface and interaction perspective. This includes a prototype that is realizable within your thesis and a concept for an ecologically valid evaluation.

User Study: The evaluation likely includes a user study, where you let users test your system and assess its effects. Ideally, you can quantitatively measure the system's effect and collect qualitative feedback for future improvements.

Thesis Writing: You document your work in a [master thesis](#) and present it. The aim of a master thesis should also be to publish your work in a research paper (however, that is clearly voluntary, and can be decided later depending on your motivation and future plans).

Requirements

- You are at the end of Master's (or Bachelor's*) studies in media informatics or human-computer interaction
- the project is supposed to happen within summer 2025, i.e. implementation and user study happening until end of July. You should be available for to work in a fulltime-equivalent amount of time between March/April and August/September. Availability for regular in-person and online meetings during that time.

- Coding and system deployment experience in the chosen technology (i.e., you should be able to implement and deploy your system to real-world users)
- Interest in the sociological aspects of this topic, and motivation to dive through related literature to reach well-based project concept
- Self-organization and IT project management skills - you are the project manager of your thesis

* Please note that the scope and complexity of this project rather correspond to a Master's rather than a Bachelor's thesis. However, if you feel very confident with the requirements and can show that with your transcript, motivation, or independent experience, it is also possible as a Bachelor's thesis.

Application

If you are interested in working on one of these (or related) aspects, I am looking forward to an email from you to florian.bemmann@ifi.lmu.de!
Please mention what you would roughly like to work on, and state why this topic is a good fit for you (e.g., through a transcript, personal, or work projects that argue for your experiences with the technologies or the ability to get into a new technology quickly)