

Public AI Displays for Society

Project Abstract

An informed society is essential for a working democracy. However, with the increasing speed of our information systems and the amount of published information, it is becoming more and more difficult for people to keep track of and judge happenings neutrally and objectively.

While previously, news was mainly published through a few large organizations, nowadays, media portals allow anybody to publish information and reach larger audiences. AI enables lay people to produce high-quality media content, such as images, videos, or well and persuasively formulated news statements.

Recommendation systems and personalized feeds thereby strengthen the user's filter bubble by showing them content that rather aligns with their opinions, and thereby in the long run, may distort their perception of the world and lead to polarization in our society. According to McLuhan's categorization of media systems, the utilized information medium is more transfusive than the provided content, hence altering and understanding the relationship between media channels and their corresponding visual appearance is crucial for the design of content for any specific medium [[Memarovic et al. 2014](#)].



Public displays are powerful tools for disseminating information, engaging passersby, and fostering public discourse in shared spaces [[Murtezaj et al. 2025](#)]. They allow information to be broadcast to diverse audiences without requiring active user engagement. They can highlight multiple perspectives and encourage critical thinking without the filter bubble effects prevalent in algorithm-driven digital platforms. Public displays offer significant advantages over personal devices in news dissemination by reaching diverse audiences simultaneously and fostering serendipitous engagement with public-interest news. Unlike personal devices, which rely on individual searches or algorithmic feeds, public displays push information directly.

Being located in shared environments like transit hubs, libraries, and public squares, they ensure equitable access to timely and relevant news [[Muller et al. 2010](#)].

Interactive public displays further enhance civic participation by prompting discussions, soliciting feedback, or supporting fact-checking initiatives. For example, they can enable citizen engagement through polls, interactive Q&A formats, or community-sourced content, encouraging reflection on local governance and political events.

In this project, we investigate what potential public displays have as tools to foster societal discourse and engage people with other opinions. They enable us to reach people regardless of their filter bubbles and recommendation algorithms. Through locality being the connecting factor and not a platform, this information medium is independent of big-tech platforms.

To get insights into how public display content reaches people and how they perceive it, we assess the perception of various content characteristics: Independent variables could evolve around

- the presentation of the content (e.g., news article, social media post, quiz, opinion, ...)
- the claimed author (e.g., journalist, scientist, layperson on social media, politician, ...)
- wording of the content (emotionality, writing style, neutrality, ...)
- UX/UI design variations signaling curated content and source(s)

In a field study, where we deploy different variants in a between-subjects design in a real-world setting, the following dependent variables could be of interest:

- trust
- self-reflection and/or sharing
- Behavioral: Does the content induce any follow-up action?
- Changes in attitudes and awareness of opinion diversity
- Attention span/duration

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 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 evaluation in the wild.

User Study: The evaluation likely includes a user study, where you let users test your system and assess its effects. We provide access to public displays installed in the university, which you are supposed to use for your study.

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 your Master's (or Bachelor's*) studies in media informatics or human-computer interaction
- the project is supposed to happen within the summer of 2025, i.e., implementation and user study happening until the end of July or August. You should be available to work in a fulltime-equivalent amount of time between May and August. 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 a well-based project concept
- Self-organization and IT project management skills - you are the project manager of your thesis.
- Interest in talking to people about your system and collecting feedback and insights on its effects in the university deployment.

* 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 doruntina.murtezaj@ifi.lmu.de and 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)