

# Comparison of data collection via traditional questionnaire and via a conversational AI



## ➤ Problem setting

Traditionally, the social and economic sciences collect data using surveys, which nowadays are administered mostly via phone or online. However, developments in the field of artificial intelligence would also allow to collect these data in a conversational way matching more closely how humans interact with each other.

This master thesis would (a) compare the results delivered by a traditional questionnaire with those from a questionnaire collected via a conversational AI to see if this novel method of data collection delivers differing results. In addition (b), the content of the data collected would pick up on new proposed EU regulation for the use of AI in fields of varying criticality. The data collection would be on the evaluation of the criticality of various use cases, to be able to compare the perspectives of the EU legislation and the population.

The master thesis includes a cooperation with the AI company Leftshift One, which will program the conversational AI.

## ➤ Task description

- Literature research to identify the problem setting and the EU legislation and its references
- Literature research on the use of conversational AI and chatbots for data collection
- Conducting the traditional survey with a partner institute
- Data analysis of differences and similarities between the two different modes of data collection
- Data analysis of the perceived criticality of use cases in the population with the criticality assumption of the EU legislation

## ➤ Supervision

- Scientific Supervisor : Univ.-Prof. Dr. Stefan Thalmann
- Co- Supervisor : Dr. Jürgen Fleiß

# What is the Fair in FAT AI? A Literature Review of the concept of fairness used in Fair, Accountable and Transparent AI.



## ➤ Problem setting

Systems based on artificial intelligence are used more and more widely, including in critical areas like hiring or pharmaceutical production. However, while often highly efficient in a technical sense, sometimes AI systems deliver biased or unfair results. Examples include the Apple credit card, where women received, all other things being equal, worse credit scores than men. Or the case of hiring, where AI systems used by Amazon also disadvantaged women.

This led to the development of new requirements when developing AI systems. Prominent among those is the idea of AI having to be fair, accountable and transparent (FAT). The master thesis will use a literature review to collect the different ideas of fair that are used when referencing FAT AI.

For this master thesis there will be an accompanying master thesis at the Catholic Theology Faculty of the University of Graz. In the parallel master thesis, theories of ethics that can serve as a basis for fair AI will be researched and the concepts of fairness found in the AI literature will be compared to those theories of ethics.

## ➤ Task description

- Literature research to identify the problem setting as well as existing initiatives/infrastructures and requirements
- Conducting targeted interviews to analyze governance approaches
- Concept development, which contains recommendations for a governance framework

## ➤ Supervision

- Scientific Supervisor : Univ.-Prof. Dr. Stefan Thalmann
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