Meta-analysis on the benefit of data-driven explanations for AI-supported decision-making

Motivation

The field of AI-based information systems (IS) has put forth impressive examples for aid in human decision-making. Though beneficial, the output of such IS often remains inscrutable to humans due to the complexity of underlying prediction models. Explainable AI offers help by explaining their output—however, the benefit of explanations for AI-supported decision-making remains widely unclear.

Task

The task includes a literature search, recording user study results (i.e., human AI- vs. XAI-supported decision performance), and evaluating the results. The student should focus on a specific domain or type of explanations.

Expected results

A holistic picture of the benefit of explanations for AI-supported decision-making for a specific domain or type of explanations and its conditions, obtained through statistics.

Title German

- Meta-Analyse zum Wert von datengetriebenen Erklärungen für die KI-gestützte Entscheidungsfindung

Level: Master thesis

Methodology

- Systematic literature research, Meta-analysis

Special prerequisites

- Some background knowledge on machine learning is recommended
- Solid skills in inferential statistics

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