MSc Seminar

Tuesday November 14, 2023 at 1PM, REYN 1101 (In-Person)

Haleema Sheraz

Towards Stable Preferences for Stakeholder-Aligned Machine Learning

Advisor: Dr. Stefan Kremer
Co-Advisor: Dr. Joshua Skorburg (Philosophy)

Abstract:

In response to the pressing challenge of kidney allocation, characterized by growing demands for organs, this research sets out to develop a data-driven solution to this problem, which also incorporates stakeholder values. The primary objective of this study is to create a method for learning both individual and group-level preferences pertaining to kidney allocations. Drawing upon data from the 'Pairwise Kidney Patient Online Survey'. Leveraging two distinct datasets and evaluating across three levels (Individual, Group and Stability), we employ machine learning classifiers assessed through several metrics. The Individual level model predicts individual participant preferences, the Group level model aggregates preferences across participants, and the Stability level model, an extension of the Group level, evaluates the stability of these preferences over time.

By incorporating stakeholder preferences into the kidney allocation process, we aspire to advance the ethical dimensions of organ transplantation, contributing to more transparent and equitable practices while promoting the integration of moral values into algorithmic decision-making.