CIBMTR - Equity in post-HCT Survival Predictions

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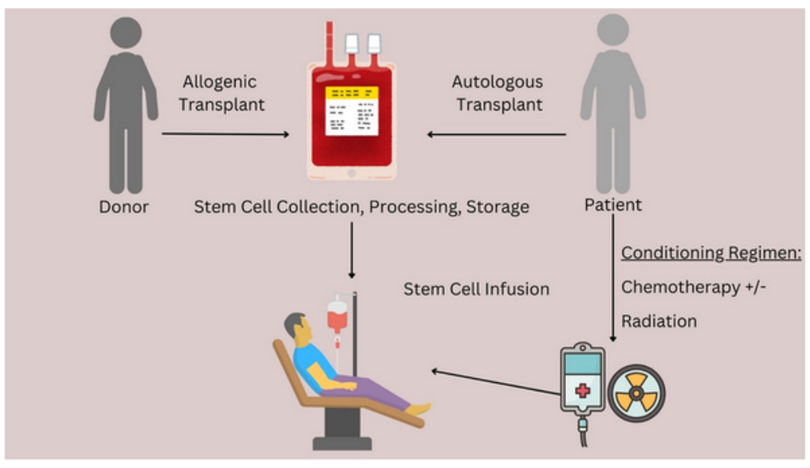
Background

Allogeneic hematopoietic cell transplantation (HCT) can be used to replace an individual's faulty hematopoietic stem cells with stem cells that can produce normal immune system cells.



Problem

Current predictive models often fall short in addressing disparities related to socioeconomic status, race, and geography. Addressing these gaps is crucial for enhancing patient care, optimizing resource utilization, and rebuilding trust in the healthcare system.

Results

We proposed a comprehensive technology stack integrating state-of-the-art tools for survival analysis, machine learning, fairness evaluation, and interpretability. The selection balances sophisticated capabilities necessary for the complex prediction task with practical implementation concerns including computational efficiency and reproducibility.

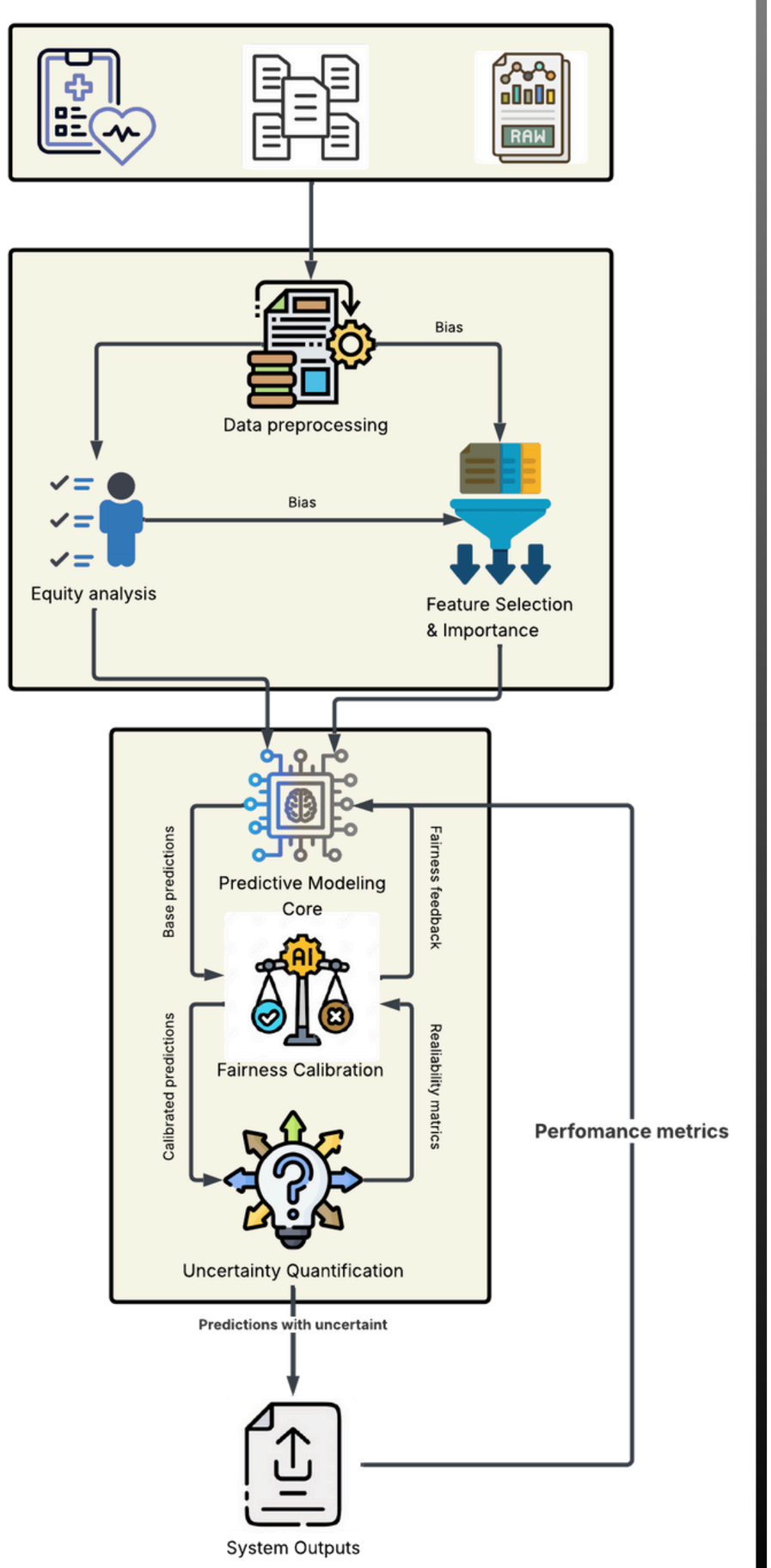
Goal

Address disparities by bridging diverse data sources, refining algorithms, and reducing biases to ensure equitable outcomes for patients across diverse race groups.

Future direction

Implementing feedback loops that incorporate new patient outcomes to continuously refine predictions, adapting to evolving medical practices while monitoring for performance drift or emerging biases.

Method



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