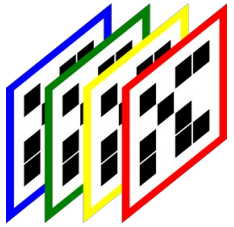
XAI CHIST-ERA project 2021-2024

GraphNex

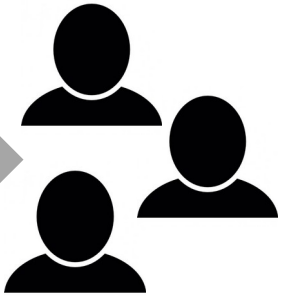
Graph Neural Networks for Explainable Artificial Intelligence

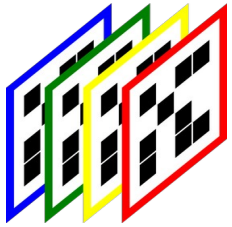


Heterogeneous data
Data + expert knowledge
Combined in a understandable way
Relationships as **graphs**

Decision
Classification
Regression

Personalisation, gamification
& user feedback





Heterogeneous data
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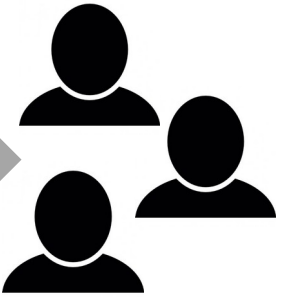
Systems genetics

Privacy protection

Personalisation, gamification & user feedback



Systems Genetics

The problem

- “classic” systems genetics approaches
  - focus on pairwise comparisons between individual biological data layers
  - fail to capture complex patterns of interactions across many biological data layers

The objective

- capture complex patterns across multiple biological data layers
- highlight the key elements of the patterns

Privacy Protection

The problem

- AI systems capture secondary information that
  - is irrelevant for the intended purpose
  - may bias the prediction
  - may infringe upon the privacy of users

The objective

- to discover complex relationships between similar, hierarchical or correlated (private) concepts

Personalisation, gamification & user feedback

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