

PhD research topic proposal
BME, Doctoral School of Mathematics and Computer Science

Name of supervisor :

MOLONTAY Roland

Degree:

PhD

Title of the topic:

Network science and interpretable machine learning-based decision support systems

Short description:

Network science tools and machine learning techniques have long been essential building blocks of many decision support systems. In particular, interpretable machine learning techniques and explainable artificial intelligence (XAI) have attracted a great deal of research interest since they can efficiently support human decision-making.

In the proposed research, we develop novel network science and interpretable machine learning methods to support human decision-making, with a particular focus on higher education decision making.

Requirements:

An MSc degree in (applied) mathematics, physics or computer science with a solid background in graph theory, algorithms, probability, statistics and machine learning. Strong programming skills (preferably in Python and/or R) are needed. Prior experience with complex networks and machine learning is an advantage.

Contact:

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Place of work:

Department of Stochastics, Institute of mathematics, BME

Statement: *The conditions of the research above are satisfied, the theme is confirmed by the Head of the Department/Institute*