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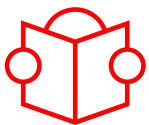
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Research field
Machine Learning

PhD title
**Uncertainty Quantification of
Machine Learning based Pathology
Diagnosis in Oncology**

Keywords
- Uncertainty quantification
- Machine Learning
- Oncology
- Trustworthy AI
- Reliability

Summary
Cancer is a major global health issue and one of the leading causes of death globally. Early detection and treatment are critical for improving patients' chances of recovery and lowering healthcare costs. Despite significant progress in the field of ML for cancer diagnosis, uncertainty quantification has been largely ignored, resulting in the development of models with questionable reliability and confidence. Quantifying uncertainty is critical for developing accountable, transparent, and trustworthy predictive systems, particularly in the sensitive field of oncology. The project aim is to to develop novel techniques for uncertainty quantification in ML algorithms for pathology diagnosis in oncology, in order to improve cancer diagnosis accuracy and reliability while lowering the risk of mortality and treatment costs.

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