Bachelor-/Master Theses
in the k-Radiomics project

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https://mml.ikim.nrw/

The Institute for Artificial Intelligence in Medicine (IKIM) offers students a captivating opportunity to be at the forefront of innovative developments in healthcare. Bringing together researchers from various disciplines, IKIM conducts groundbreaking research that not only enhances patient care but also revolutionizes the training of future generations of doctors and AI scientists. As part of the University Medicine Essen and the University of Duisburg-Essen, IKIM provides an inspiring environment to delve into the exploration and application of AI technologies.

Until now, complex valued MRI raw data have not been used in clinical practice due to a lack of interpretability. The aim of the project is to develop new AI methods to use this data and revolutionize the characterisation of tumours and tissues.

Research Topics

- Machine Learning
  - Designing & testing novel complex valued neural networks
  - Multi-Task learning
- Medical Physics
  - Work with complex valued MRI raw data
  - Novel approaches of exploiting the Fourier domain
- Translation of Machine Learning Methods

Requirements

- Interest in the topic of computer vision and assistive technology
- Python and PyTorch skills and knowledge are desirable

Contact

If you are interested in a thesis, please feel free to send us your CV and a Transcript of Records. We welcome any interesting ideas and look forward to publication of your work.

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