

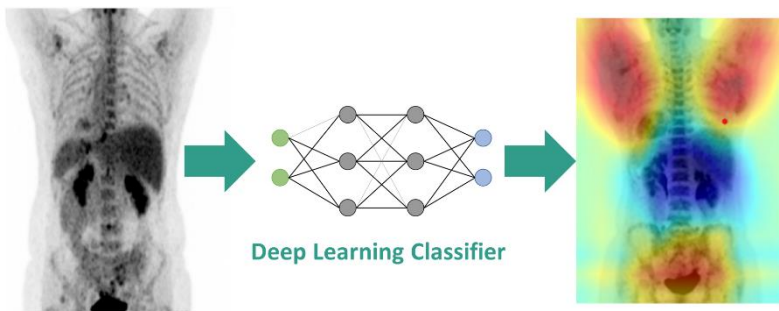
Bachelorarbeit

Machine Learning for PET-based Sarcoidosis Detection

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Motivation

In recent years, Machine Learning has made significant strides in overcoming challenges in medical diagnosis. This project aims to address the complex task of diagnosing sarcoidosis using Machine Learning techniques. Diagnosing sarcoidosis is particularly challenging due to the wide range of symptoms and areas of manifestation. One aspect of this project focuses on accurately diagnosing sarcoidosis using PET (Positron Emission Therapy) scans, while also identifying which regions of the images are crucial for accurate prediction.



Task

For this project, a significant portion of both the data pipeline and deep learning pipeline has already been established. The primary objective is to conduct experiments with different classifiers and augmentation methods to determine the combination that offers the highest performance. To achieve this, the student will need to research various deep learning classifiers and augmentation techniques. Subsequently, they will implement these findings into the current pipeline and test the performances.

Additional notes:

- A foundational level of Python proficiency is required for this project.
- Prior knowledge of Machine Learning is beneficial.
- Familiarity with TensorFlow can be advantageous.
- Experience in image processing is beneficial.
- Knowledge of medical imaging is advantageous.

If you are interested in this project or would like to know more about it, don't hesitate to email me at mark.arndt@kit.edu.

Forschungsbereich

Medical Imaging for Modeling and Simulation

Projekt

Medical Imaging for Modeling and Simulation

Ausrichtung

Deep Learning, Medizinische Bildgebung

Studiengang

Elektrotechnik und Informationstechnik
Physik
Informatik

Einstieg

ab sofort



Ansprechpartner

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