



TUTORIAL

AI for Tomography Image Analysis

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Number of participants : 15

The first hour of this tutorial will be dedicated to the principles and methods, with an emphasis on the following topics :

- Fundamentals of AI and statistical inference : Principles of statistical prediction, AI/Data science terminology
- Machine learning methods
- Basics of deep learning : What neural networks are, how they can be trained and used
- Deep learning models specifically for images
- Important points when applying AI to tomography data

The remaining time will be a hands-on demonstration, with the application of AI methods to a model tomography dataset. We will have a prebuilt model available through Google Colab that users can modify and train/tune to better understand how different aspects of the model impact its performance.

The practical will be in English, and participants will need to bring their own laptop.

Since the hands-on portion will be in Google Colab, participants will need to bring a laptop that can connect to the internet. Google Colab does not require anything besides an internet connection, but if participants were at least acquainted with Python and an IDE like VS Code, that would be preferable