

# Hands-on: PyTorch Medical Imaging

## Data Loading

DICOM reading with pydicom, NIfTI with nibabel. Custom Dataset classes

## Model Implementation

ResNet, U-Net from scratch or torchvision. Custom layers for medical imaging

## Training Loops

Loss functions, optimizers, learning rate schedules. Mixed precision training

## Validation

Metrics computation, checkpointing. Early stopping and model selection

## Inference

Sliding window for large images. Batch processing and result aggregation