

# Computing Methods for Experimental Physics and Data Analysis

## Data Analysis in Medical Physics

Lecture 11: Hands-on Session on Training ML and DL classifiers on medical images

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# Today's objective is...

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- To practice with Convolutional Neural Networks (CNN) to classify images
- To practice with Convolutional Auto-Encoders (CAE) to segment images

Follow and modify the code in [https://github.com/retico/cmepda\\_medphys](https://github.com/retico/cmepda_medphys)

- [Lecture11\\_CNN\\_pythonized.ipynb](#)
- [Lecture11\\_autoenc.ipynb](#)  
(... and possibly extend it!)

The dataset used in the examples are:

- DATASET/IMAGES/Mammography\_micro
- DATASET/IMAGES/Mammography\_masses