Course intro

02476 Machine Learning Operations

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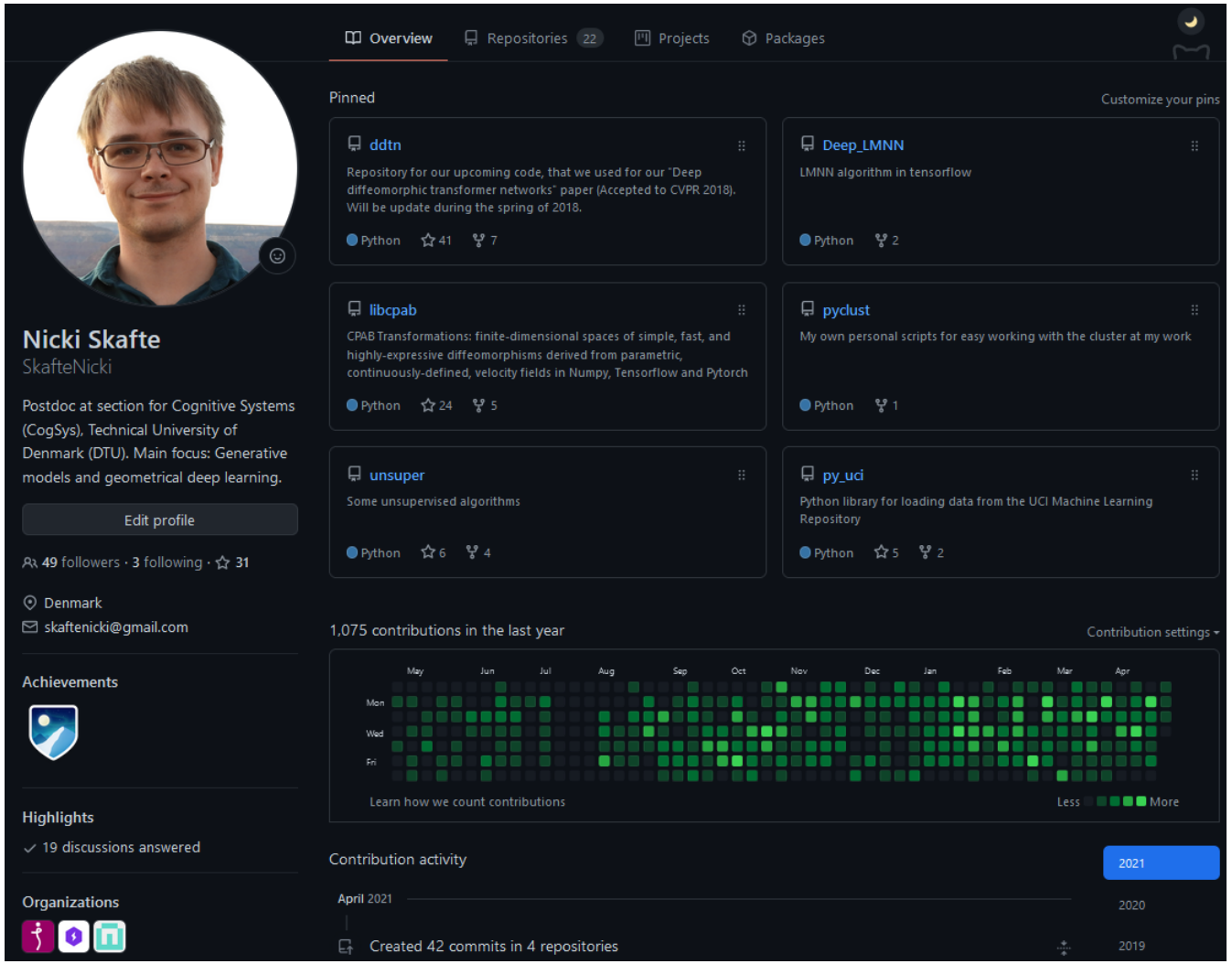
DTU Compute

Who am I?

- Bachelor, Master and PhD from DTU
- Currently: Postdoc at section for cognitive systems
- Focus: Inductive biases in deep learning
- Eager open-source contributer



Course settings

- 5 ECTS
- 3 weeks period
- Level: Master
- Grade: Pass/not passed
- Type of assessment: hand-in off code + weekly project updates + final oral examination/presentation
- Recommended prerequisites: 02456 (Deep Learning) or
  - General understanding of machine learning (datasets, probability, classifiers, overfitting etc..) and
  - Basic knowledge about deep learning (backpropagation, convolutional neural network, auto-encoders etc..)
  - Coding in Pytorch

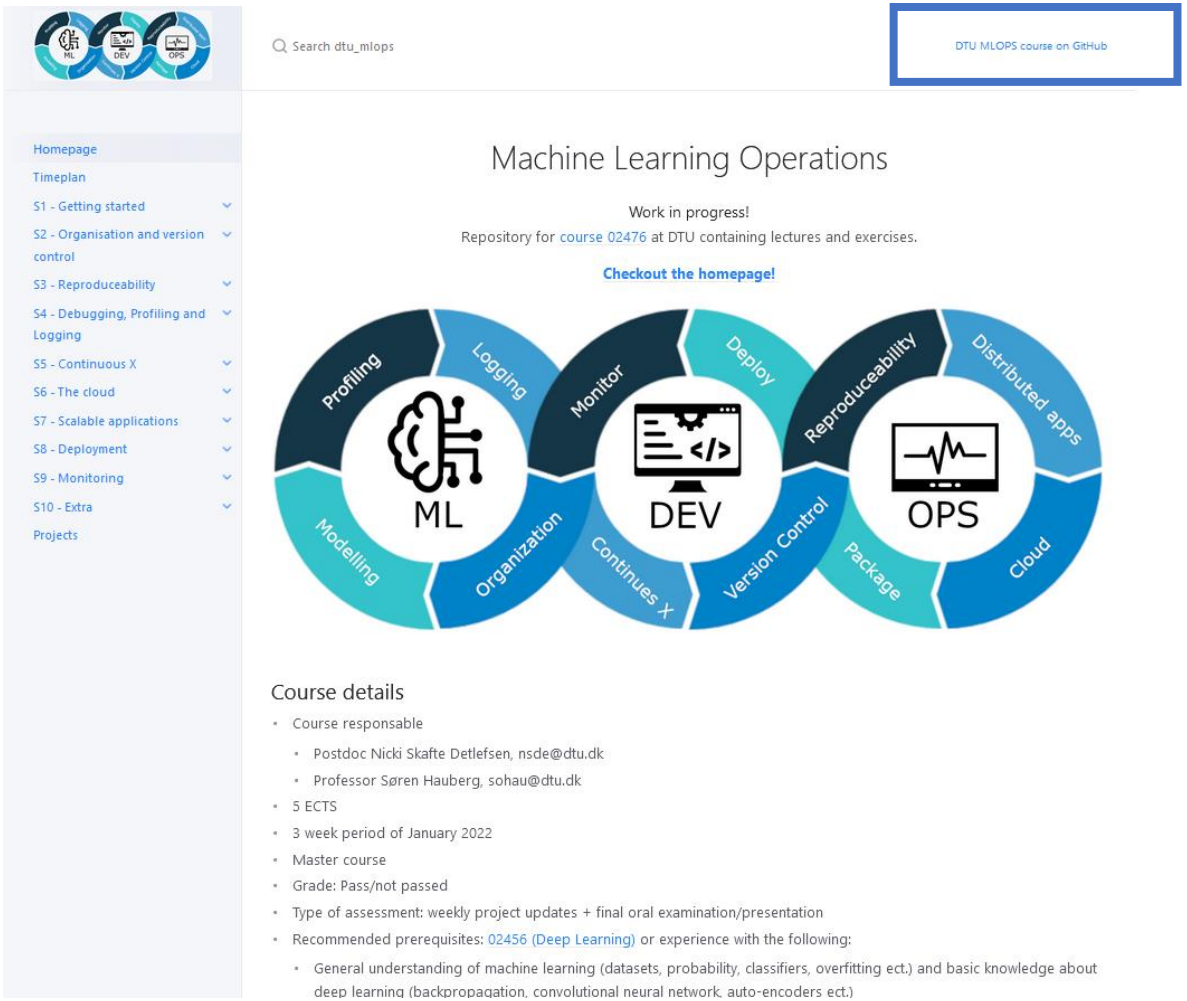
Course webpage

Webpage with lectures + exercises:

https://skaftenicki.github.io/dtu_mlops/

Join slack for communication:

https://join.slack.com/t/dtumlops/shared_invite/zt-10vol1tec-TS5qcF_WqTxIpQc8PdTz9g



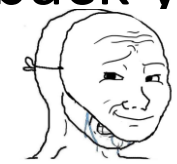
What is this course/What is it not

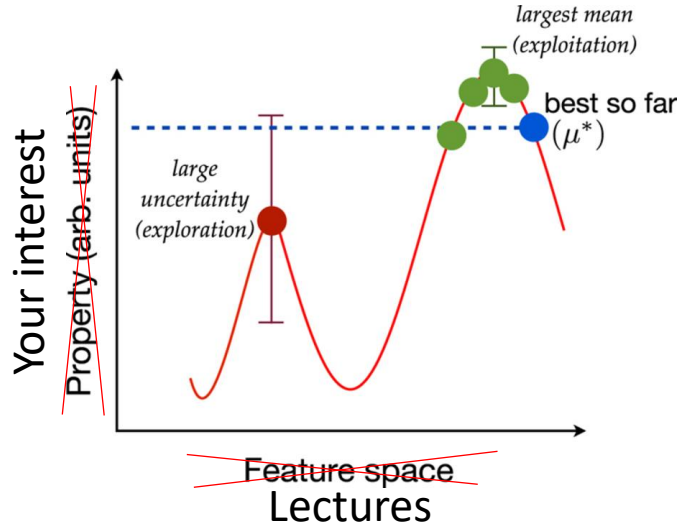
- What is this course:
  - Introduce the student to a number of coding practices that will help them organization, scale, monitor and deploy machine learning models either in a research or production setting. To provide hands-on experience with a number of frameworks, both local and in the cloud, for doing large scale machine learning models.
  - Keywords:
    - Organization
    - Scalability
    - Reproducibility
    - Hands-on experience

- What this course is not:
  - How deep learning models works (02456)

What do I expect from you

- Second iteration of this course
- This course is still in its development phase, meaning that the material may be suboptimal
- We provide lectures, exercises and guidence but encourage self-study
- Make sure to both explore and exploit it!
- Provide all the feedback you have, I can take it!





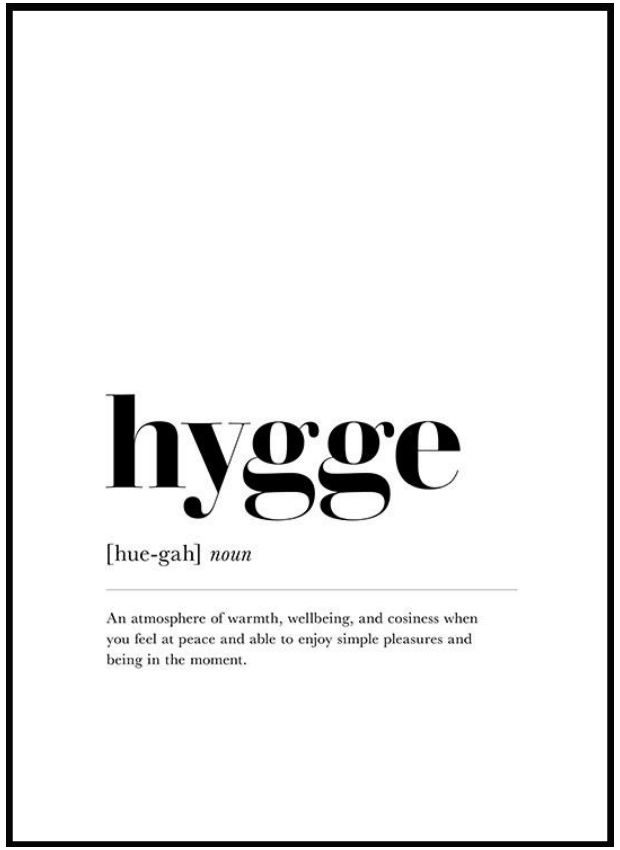
I typical day

MLOps

- Exercise days:
  - Meet in at 9:00
  - Lecture for 15-30 mins
    - I am still learning how to do lectures
    - Lectures are not meant to give teach you anything, but provide some context to the topic of the day
  - Exercises until 14:00
    - Remember to take a lunch break
    - If you are not done at 14:00, you are still free to leave. Rooms are booked until 17:00.
- Project days:
  - Sometimes a small lecture or company presentation
  - Rest of the day you decide
  - Office hour

What I hope from this course

- Have fun!
- Playing around with the different frameworks
- Maybe learn something along the way



A note on the projects

- Approxematately 1/3 of the course time is spend on project work
- More info here:
  https://skaftenicki.github.io/dtu_mlops/projects

- Already now you are recommende to think about forming groups of
  - 4 people
  - 3 and 5 is also acceptable

- Thursday we will do some speeddating to form groups for people not already having one. Also feel free to write in the *#find-a-group* slack channel.