

Course intro

Machine Learning Operations

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Postdoc

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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 contributor

The screenshot shows the GitHub profile of Nicki Skaftes. The profile includes a circular profile picture, the name 'Nicki Skaftes' with the handle 'SkaftesNicki', and a bio stating 'Postdoc at section for Cognitive Systems (CogSys), Technical University of Denmark (DTU). Main focus: Generative models and geometrical deep learning.' It also shows '49 followers · 3 following · 31 stars' and contact information for Denmark and email. The 'Pinned' section lists four repositories: 'ddtn', 'Deep_LMNN', 'libcpab', and 'pyclust'. Below this is a 'Contribution activity' section showing a heatmap of contributions over the last year (May to April) and a summary stating 'Created 42 commits in 4 repositories'.

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

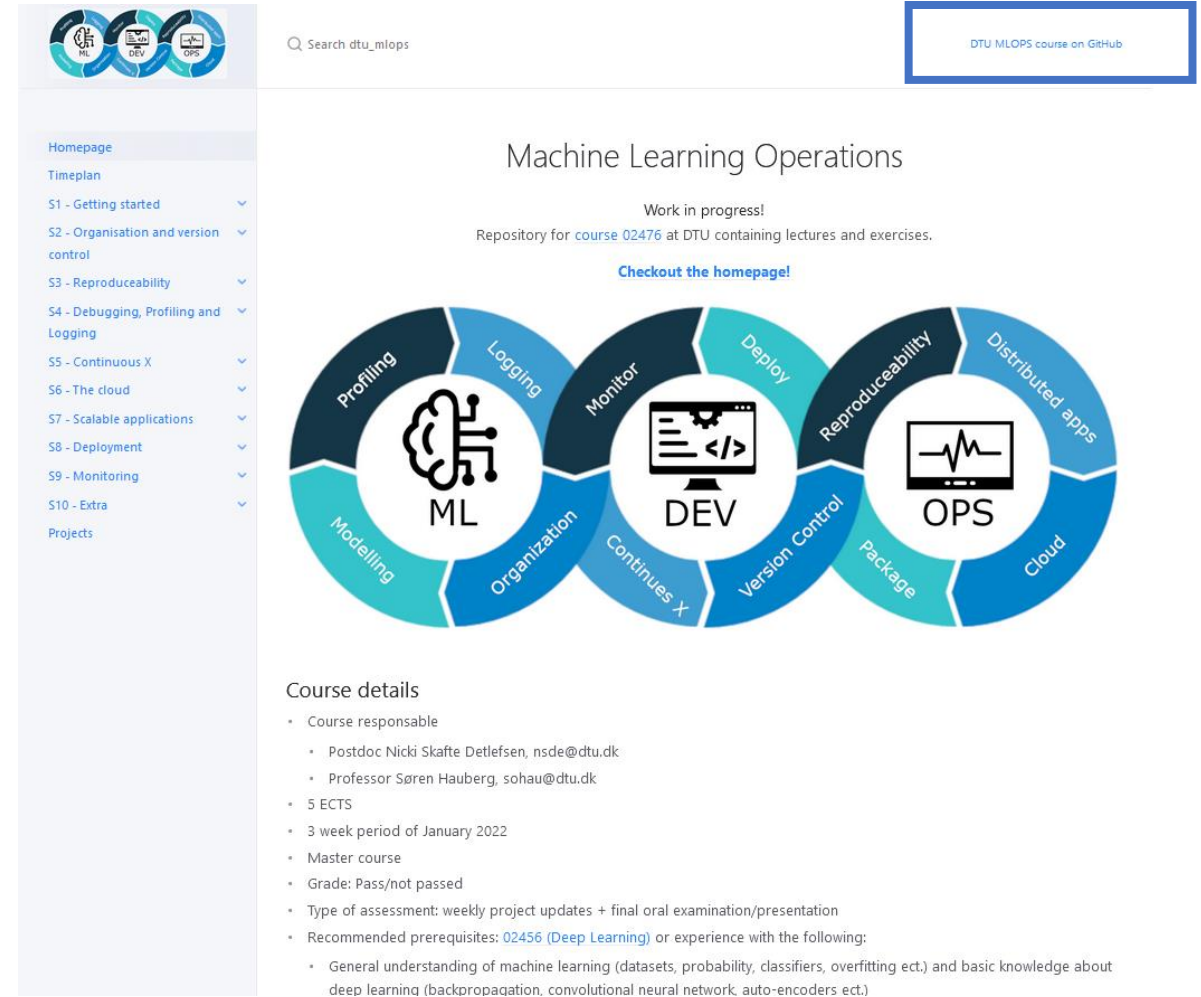


Webpage with lectures + exercises:

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

Join slack for communication:

https://join.slack.com/t/dtumlops/shared_invite/zt-10vol1tec-TS5qcF_WqTxlpQc8PdTz9g



The screenshot shows the 'dtu_mlops' course webpage. At the top, there's a search bar and a link to the 'DTU MLOps course on GitHub'. The main content area features a 'Machine Learning Operations' title, a 'Work in progress!' notice, and a link to 'Checkout the homepage!'. Below this is a large circular diagram illustrating the MLOps lifecycle. The diagram is divided into three main sections: ML (Machine Learning), DEV (Development), and OPS (Operations). The ML section includes Profiling, Logging, and Modelling. The DEV section includes Monitor, Deploy, and Continuous X. The OPS section includes Reproducibility, Version Control, Package, Cloud, and Distributed apps. The course details section lists the course responsible (Postdoc Nicki Skaft Detlefsen and Professor Søren Hauberg), 5 ECTS, a 3-week period of January 2022, a Master course grade, weekly project updates, and recommended prerequisites (02456 Deep Learning or experience with machine learning).

Machine Learning Operations

Work in progress!
Repository for [course 02476](#) at DTU containing lectures and exercises.

[Checkout the homepage!](#)

Course details

- Course responsible
 - Postdoc Nicki Skaft Detlefsen, nsde@dtu.dk
 - Professor Søren Hauberg, sohau@dtu.dk
- 5 ECTS
- 3 week period of January 2022
- Master course
- Grade: Pass/not passed
- Type of assessment: weekly project updates + final oral examination/presentation
- Recommended prerequisites: [02456 \(Deep Learning\)](#) or experience with the following:
 - General understanding of machine learning (datasets, probability, classifiers, overfitting ect.) and basic knowledge about deep learning (backpropagation, convolutional neural network, auto-encoders ect.)

What is this course/What is it not

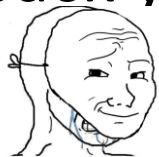
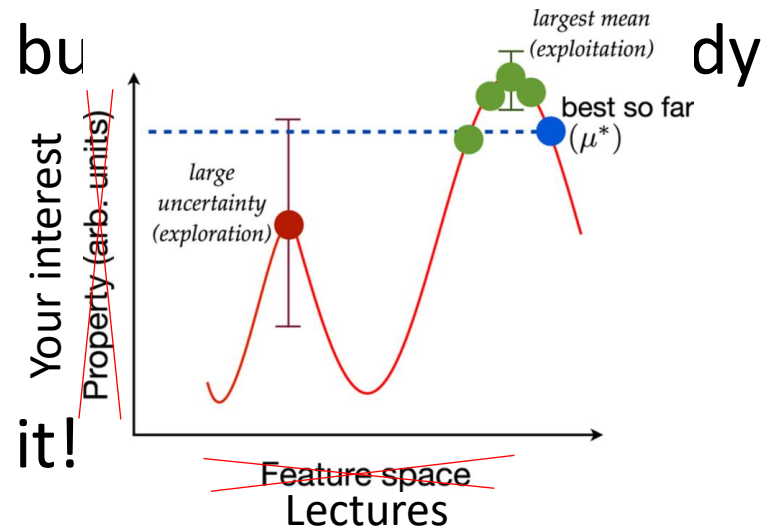


- What is this course:
 - Introduce the student to a number of coding practices that will help them organization, scale, monitor and deploy machine learning models either in a research or production setting. To provide hands-on experience with a number of frameworks, both local and in the cloud, for 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 guidance but
- Make sure to both explore and exploit it!
- Provide all the feedback you have, I can take it!



I typical day



- 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

People with no idea
about AI, telling me my
AI will destroy the world



Me wondering why my
neural network is
classifying a cat as a dog..



hygge

[hue-gah] *noun*

An atmosphere of warmth, wellbeing, and cosiness when
you feel at peace and able to enjoy simple pleasures and
being in the moment.

A note on the projects



- Approximately 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.