

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', location 'Denmark', and email 'skaftenicki@gmail.com'. The 'Achievements' section shows a shield icon. The 'Highlights' section shows '19 discussions answered'. The 'Organizations' section shows logos for 'CogSys', 'DTU', and 'MLOps'. The 'Pinned' section displays four repositories: 'ddtn', 'Deep_LMNN', 'libcpab', and 'pyclust'. The 'Contribution activity' section shows a calendar heatmap for the last year with 1,075 contributions, and a bar chart showing 42 commits in 4 repositories for April 2021.

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/slack-ddr8461/shared_invite/zt-qzk7ho8z-1tBT_SkkkxtpgMU8x197pg

Search dtu_mlops

DTU MLOps course on GitHub

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

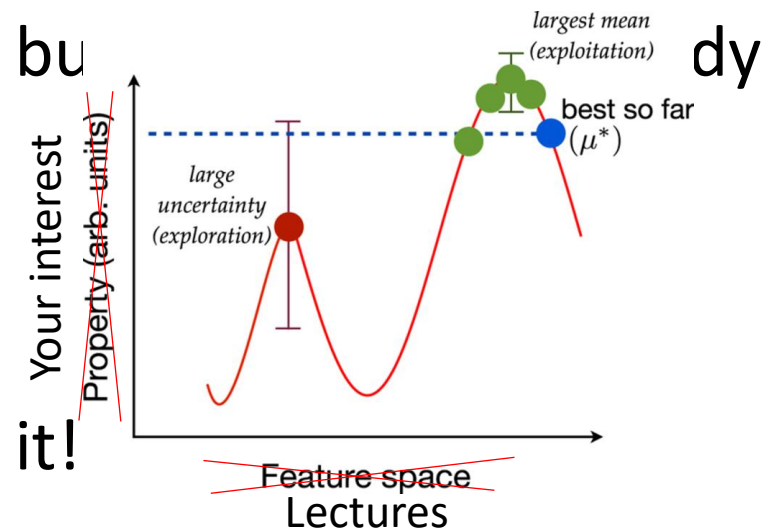


- What is this course:
 - Introduce the student to a number of coding practices that will help them organization, scale, monitor and deploy machine learning models either in a research or production setting. To provide hands-on experience with a number of frameworks, both local and in the cloud, for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