

23.10.25

Machine Learning With TensorFlow

GENERAL INTRODUCTION

- **Introduction of the Instructors**
- **Intro to opencampus.sh**
- **Organizational Matters**
- **Introductory Discussion on AI**
- **Course Projects**
- **ML Frameworks**

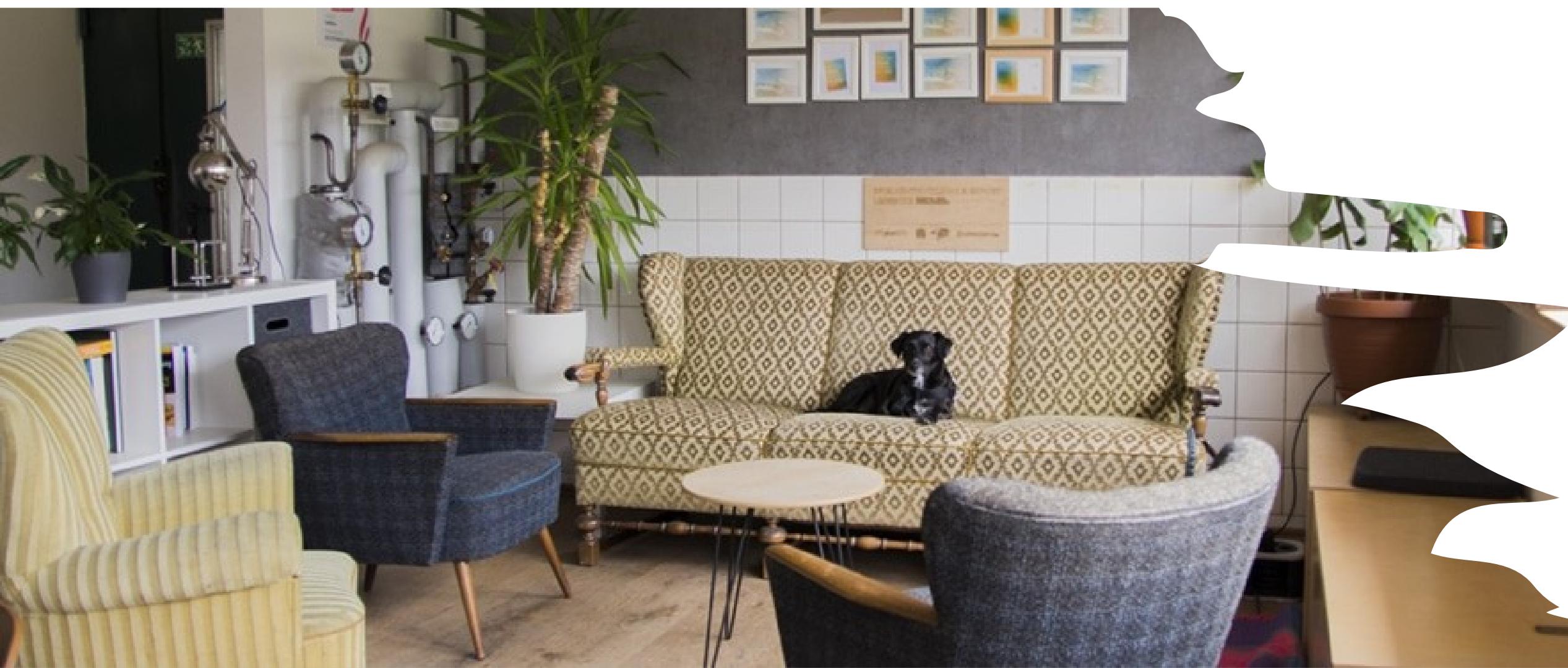
INTRODUCTION OF THE INSTRUCTORS



OPENCAMPUS.sh

- Nonprofit organization which oversees a variety of initiatives
- Offering a wide range of educational opportunities, support, and networking for entrepreneurs, creatives, and anyone curious, regardless of age, educational background, or origin
- The services are open to everyone and mostly free.
- The goal is to support the entrepreneurial landscape, promote creative change processes, and contribute to innovative and sustainable future development.



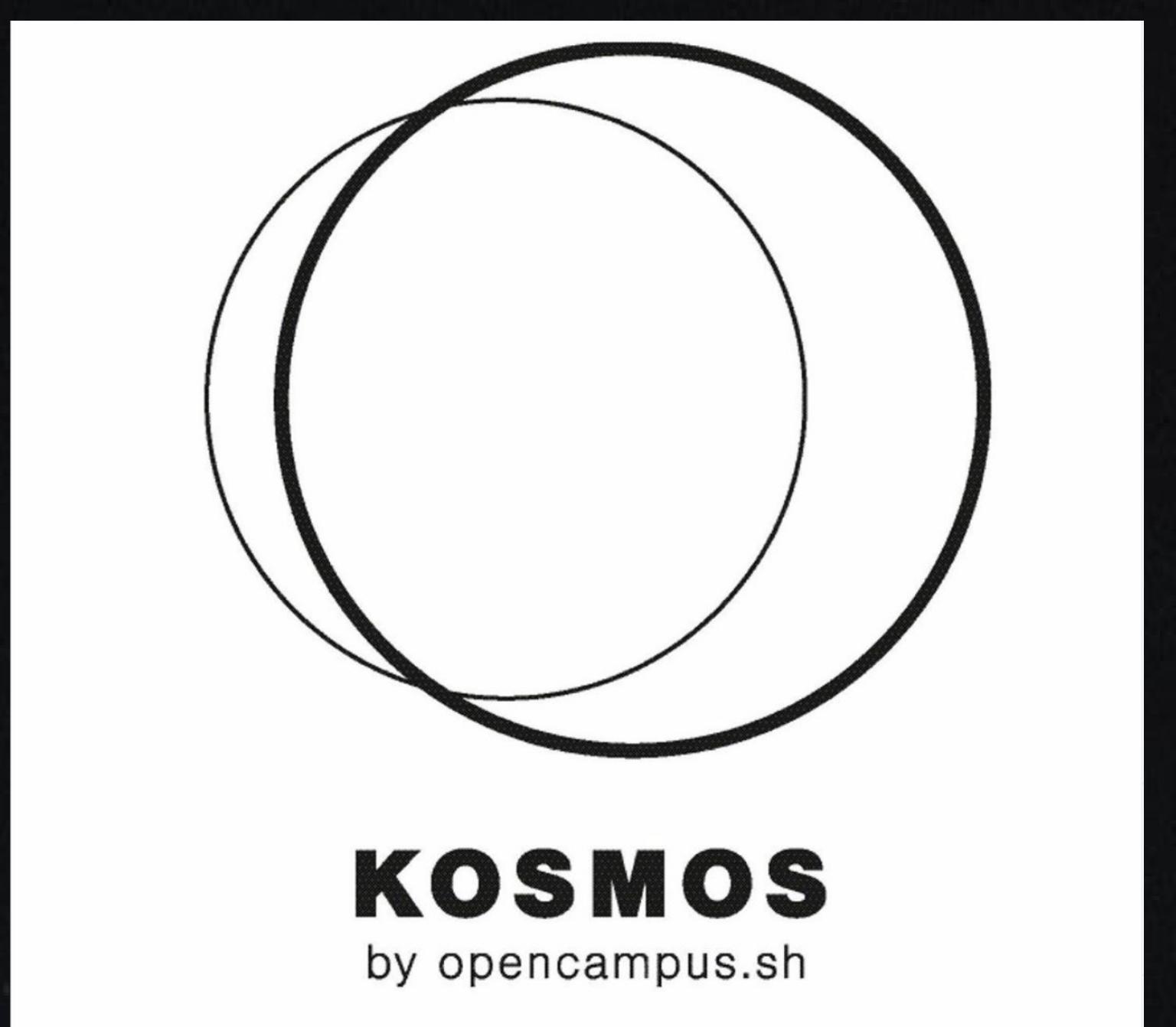




Cobl

COZY WORKING, CULTURE
& EVENTS





KOSMOS

by opencampus.sh





FABLAB KIEL



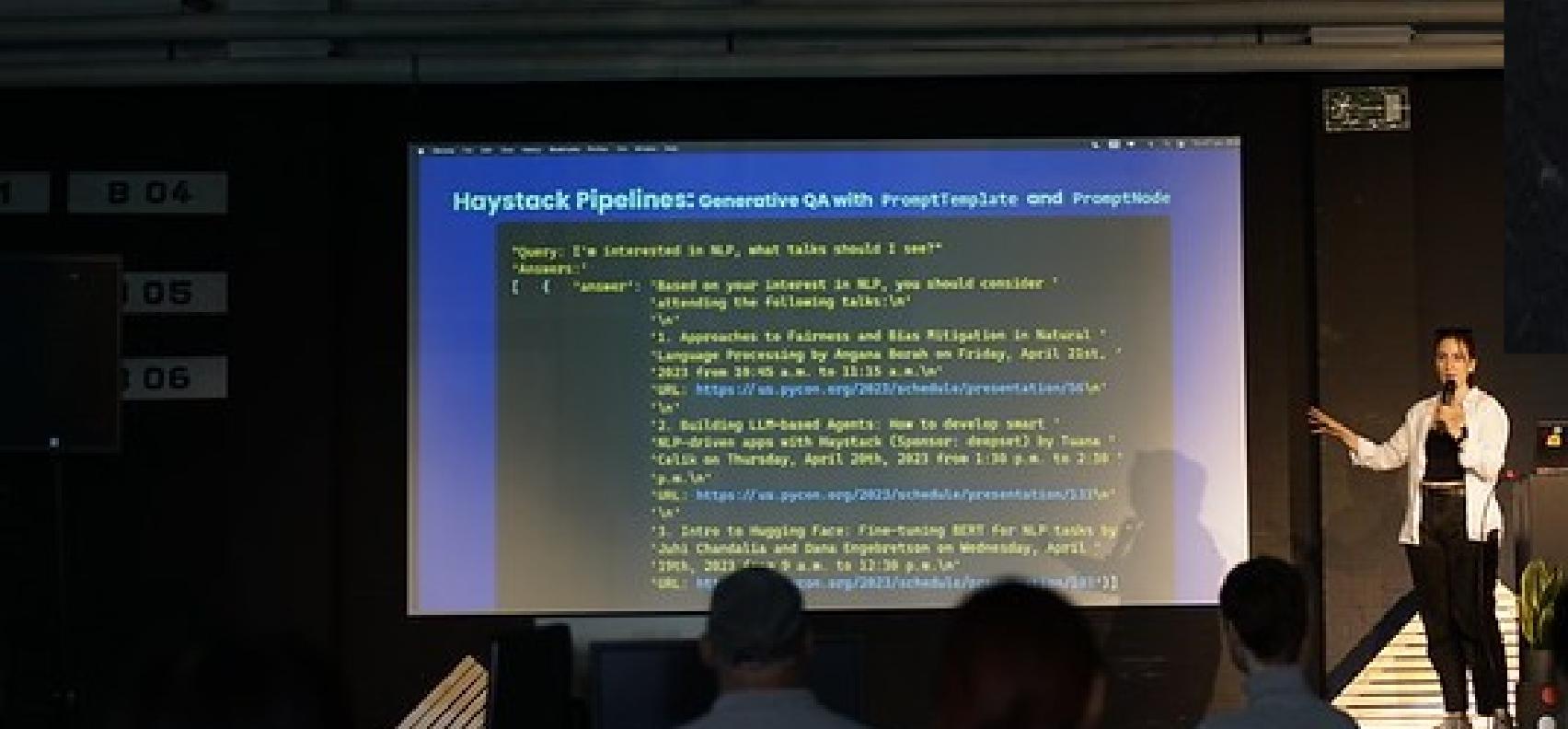
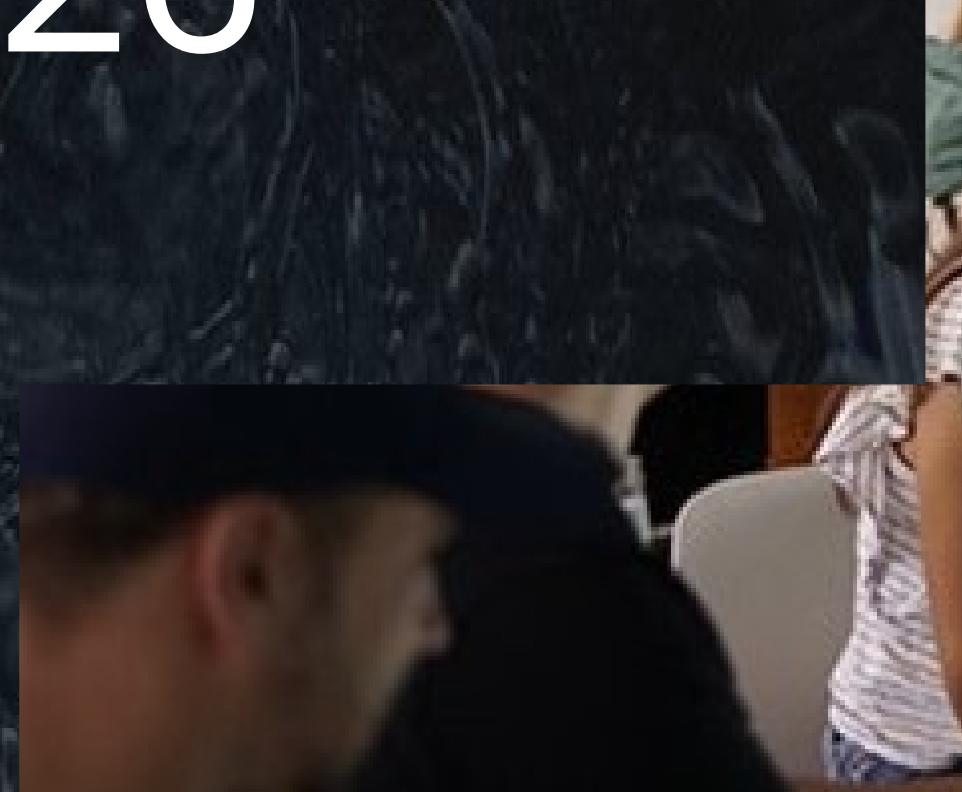
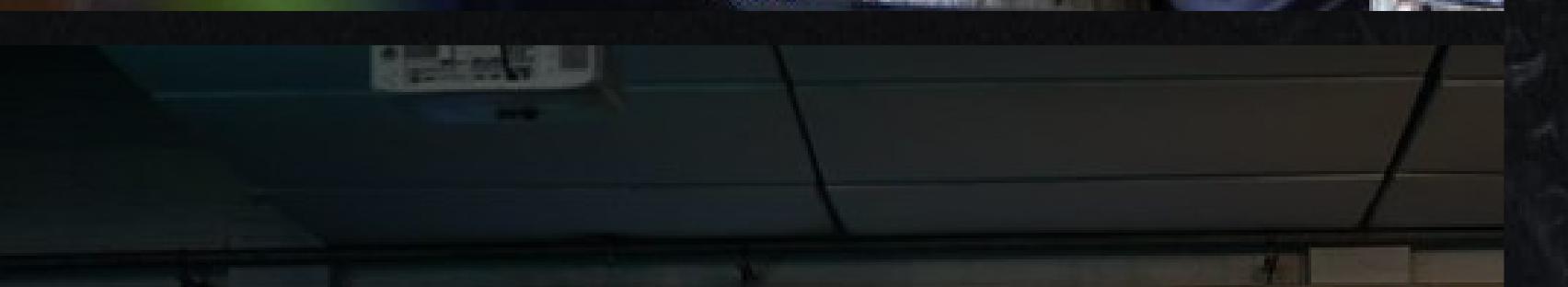
Diving into AI and Machine Learning at the Water's Edge.

steffen@opencampus.sh

SUBSCRIBE

<https://coding.waterkant.sh>

Coding. Waterkant 2026



Coding.Waterkant

2026

July 06 - 10

- Work for four consecutive days:
 - on your own machine learning project or
 - support others in their project
- Take part in workshops
- Get input and feedback by invited experts
- Present your work to a larger audience.
- Take educational leave
- Get accommodation on site

Im Rahmen der ständigen Verbesserungen unserer Plattform haben wir die E-Mail-Adresse deiner Gruppe in coding-waterkant-announce@messages.meetup.com geändert. Du kannst dies in den optionalen Einstellungen deiner Gruppe ansehen.

X



Coding.Waterkant

★★★★★ (126) ?

Neu: Event-Feedbackübersicht

Tippe auf die Sterne, um alle deine Eventbewertungen in der Übersicht anzuzeigen.

[Weitere Informationen](#)

📍 Kiel, Deutschland

👤 981 Mitglieder · Öffentliche Gruppe i

👤 Organisiert von **opencampus.sh** and **6 others**

Teilen:

[Info](#)[Events](#)[Mitglieder](#)[Fotos](#)[Diskussionen](#)[Mehr](#)[Event erstellen](#)[Gruppe verwalten](#)

Über uns

Our meetup is organized with support of opencampus.sh and the Digitale Wirtschaft Schleswig-Holstein (DiWiSH).

[Mehr lesen](#)



Organizers



opencampus.sh and 6 others

[Nachricht](#)

Members (981)

[Alles ansehen](#)



ORGANIZATIONAL MATTERS

Attendance Registration:

Online

- **Use your full names in the zoom meetings!**
- **Turn your camera on!**
- **Take part via laptop or desktop in a sufficiently quite environment!**

Presence

- Scan the QR-Code if you participate in presence

Please write us if you will not go on with the course!

MATTERMOST CHAT

- Complete your profile in the Mattermost chat with your full name and a photo.
- Please, always ask any questions to us in the course chat!!

MATTERMOST CHAT

The screenshot shows the Mattermost chat interface. On the left, there's a sidebar with user profiles and channel lists. A yellow arrow points from the sidebar to the channel header. Another yellow arrow points from the channel header to the pinned post area.

sose21 @steffen

C_Machine Learning With TensorFlow ☆

1 Tuesday, 4-6 p.m.: Zoom; Course Handbook

Find channel ← → +

ANNELS

- 00 - Announcements
- 01 - Questions
- C_Advanced Machine Lear...
- C_Deep Learning from Scr...
- C_Einführung in Data Scie...
- C_Machine Learning für di...
- C_Machine Learning With ...**
- Kursleitungen

Beginning of C_Machine Learning With TensorFlow

This is the start of the C_Machine Learning With TensorFlow channel, created by Steffen Brandt on March 02, 2021. Any member can join and read this channel.

Invite others to this channel **Set a Header**

March 25

Pinned

Steffen Brandt 23:10

Welcome to the course "Machine Learning With TensorFlow"!

In this course we will try to provide you with hands-on knowledge about how to train machine learning models with TensorFlow. An important part when working in the field of machine learning is networking and working together in a team. An important goal of the course is therefore that you get to know each other and work in a team on a project. I would therefore like to ask you to introduce yourself quickly here in the channel already. Maybe

COURSE HANDBOOK



opencampus.sh Machine
Learning Program

EDU-Platform

Chat

Search...

opencampus.sh Machine Learning
Program

Course Kick-Off

How do I choose a course?

FAQ

COURSES

Einführung in Data Science und
maschinelles Lernen

Machine Learning with
TensorFlow

Requirements for a Certificate of
Achievement or ECTS

Preparation

Week 1 - General Introduction

Week 2 - Introduction to
TensorFlow, Part I

Week 3 - Introduction to

Week 1 - General Introduction

This week you will...

- get a basic introduction to neural nets in order to get a first intuition in the underlying mechanisms
- get a first idea about possible projects you might want to work on throughout the course

Learning Resources



220419_Introduction to Neural Nets.pdf 4MB
PDF

- Video Neural Networks Explained (12 minutes)
- Introductory course on Python from Kaggle
- Tutorial on Colab on Medium

ZOOM

- Try the different viewing modes:
 - Gallery View/ Active Speaker
 - Split Screen/ Full Screen Mode
- Maybe watch this video to get an idea:
<https://www.youtube.com/watch?v=v3IPAbpVjd4>

The screenshot shows the Zoom Meeting interface with the Settings window open. The Settings window has a sidebar with icons for General, Video, Audio, Share Screen, Chat, Background & Filters, Recording, Profile, Statistics, Keyboard Shortcuts, and Accessibility. The 'Share Screen' option is highlighted with a blue button.

Window size when screen sharing:

- Fullscreen mode
- Maximize window
- Maintain current size

Scale to fit shared content to Zoom window

Show my Zoom Windows to other participants when I am screen sharing

Enable the remote control of all applications

Side-by-side mode

Silence system notifications when sharing desktop

When I share my screen in a meeting

- Automatically share desktop
- Show all sharing options

When I share directly to a Zoom Room

- Automatically share desktop
- Show all sharing options

Advanced

Video Controls:

- Select a Camera (Alt+N to switch)
 - NewTek NDI Video
 - Integrated Camera
- Choose Virtual Background...
- Choose Video Filter...
- Video Settings...**

Participants: Steffen Brandt

Mute Start Video Security Participants

17.04.2025 General Introduction

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jeremy von Winckelmann
speaker



Steffen Brandt
speaker
[LinkedIn-Profil](#)

24.04.2025 Introduction to TensorFlow for AI, Machine Learning, and Deep Learning, Part I

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jake Petersen
speaker

08.05.2025 Introduction to TensorFlow for AI, Machine Learning, and Deep Learning, Part II

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Hannes Körner
speaker

15.05.2025 Convolutional Neural Networks, Part I

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jake Petersen
speaker

22.05.2025 Convolutional Neural Networks, Part II

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Hannes Körner
speaker

05.06.2025 Natural Language Processing, Part I

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Steffen Brandt
speaker
[LinkedIn-Profil](#)

12.06.2025 Natural Language Processing, Part II

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jake Petersen
speaker

19.06.2025 Sequences, Time Series and Prediction, Part I

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jeremy von Winckelmann
speaker

26.06.2025 Sequences, Time Series and Prediction, Part II

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jeremy von Winckelmann
speaker

03.07.2025 Presentation of the Final Projects, Part I

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Steffen Brandt
speaker
[LinkedIn-Profil](#)

10.07.2025 Presentation of the Final Projects, Part II

18:15 - 20:00 [Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE](#)



Jake Petersen
speaker



Steffen Brandt
speaker
[LinkedIn-Profil](#)

PROJECT MILESTONES

30.10. Present your Ideas

06.11. Form Groups

13.11. Literature Review

20.11. Dataset Characteristics

Deadline for completing the repo sections: 23.11.

27.11. Individual Feedback Sessions

04.12. Baseline Model Estimation

11.12. Definition of Model Evaluation

Deadline for completing the repo sections: 14.12.

18.12. Individual Feedback Sessions

15.01. Project Presentations, Part I

22.01. Project Presentations, Part II

Submission deadline for the documented repo: 30.02.

FIRST BREAKOUT

- 15-20 Minutes
- Present yourself
- Discussion Questions:
 - Do you know examples for Machine Learning?
 - Do you know examples for Deep Learning?

Artificial Intelligence

A science devoted to making machines think and act like humans.

Machine Learning

Focuses on enabling computers to perform tasks without explicit programming.

Deep Learning

A subset of machine learning based on artificial neural networks.

Artificial Intelligence

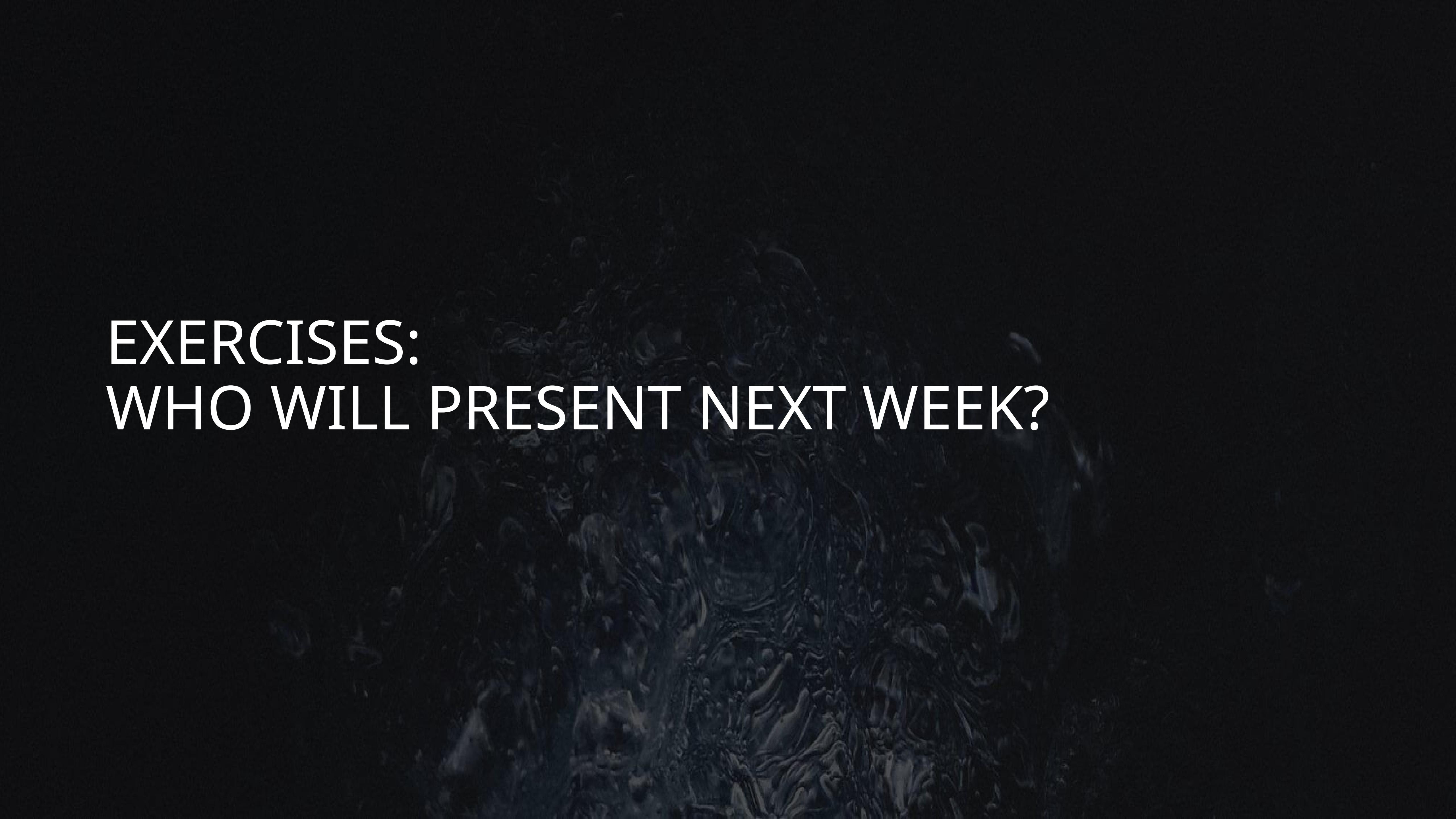
Machine Learning

Deep Learning

//

EXERCISES

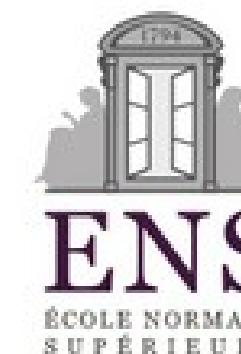
- Each week two to four of you will present the exercises given in the course handbook
- Check the guidelines to present the exercise given in the course handbook!
- Each of you presents at least once



**EXERCISES:
WHO WILL PRESENT NEXT WEEK?**

PROJECTS

- Bring your own idea and data
- Choose a project from the **Challenge Data** platform



Institut
Louis
Bachelier



AGIR POUR
L'ÉDUCATION
— UN ENJEU SCIENTIFIQUE —
POUR LA SOCIÉTÉ

Welcome to the Challenge Data website!!

Each year, we organize machine learning challenges from data provided by public services, companies and laboratories: [general documentation](#) and [FAQ](#). Seasons begin in January; the challenges are introduced in the context of Stéphane Mallat's lesson at the Collège de France.

A prize ceremony for the best participants of the preceding season will be held in February at the College de France (03/02/2022).

For participants

[Guide](#) to create an account, choose your challenges and submit solutions.

RELEVANCE OF THE PROJECTS

- Most important for a career in ML will be work experience and your GitHub profile
- Focus on building a noteworthy GitHub project repository
- Use the template repository
- Outstanding projects will be nominated for the VDE Machine Learning Prize, which is awarded once a year

EVENTS

COURSE PROJECTS

Choosing a Project

[How to Start, Complete,
and Submit Your Project](#)

ADDITIONAL RESOURCES

Glossary

Coursera

Selecting the Optimizer

Choosing the Learning Rate

Learning Linear Algebra

Learning Python

Support Vector Machines

ML Statistics

TOOLS

Git

RStudio

Google Colab

COURSE PROJECTS

 Copy ▾[Starting Your Project](#)

Working on Your Project

Submitting Your Project

Was this helpful?



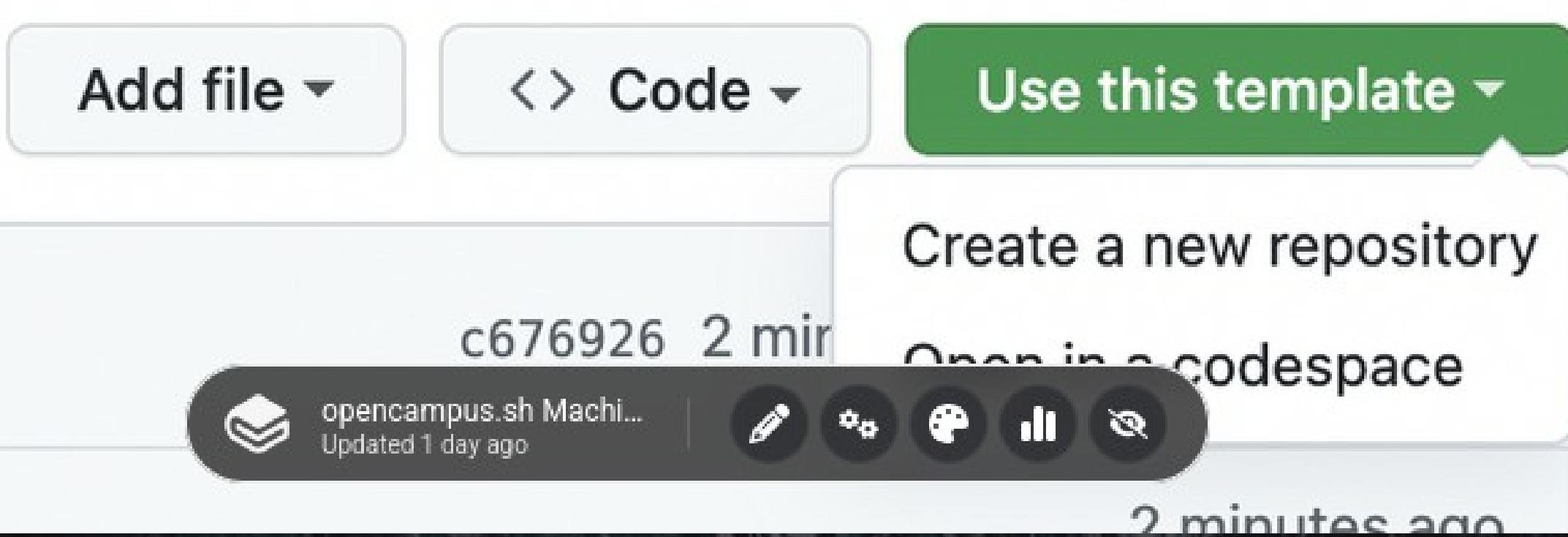
How to Start, Complete, and Submit Your Project

In all Machine Learning courses you have:

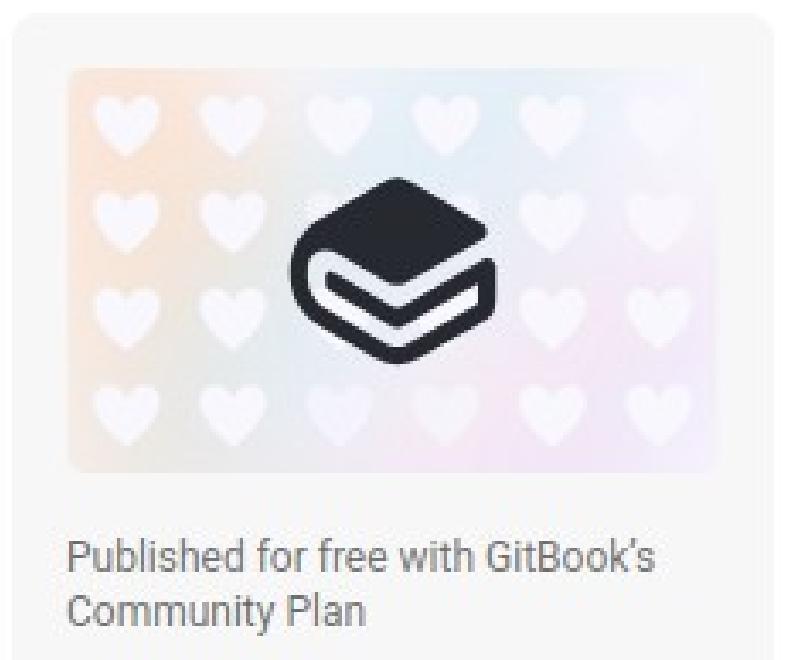
- to complete a machine learning project in a team of up to 4 participants,
- attend at least all but 2 sessions of the course, and
- use the provided project template repository for documentation (unless otherwise instructed).

Starting Your Project

1. Navigate to the [Template Repository ↗](#)
2. Use this Template: Above the file list, click the "Use this template" button.

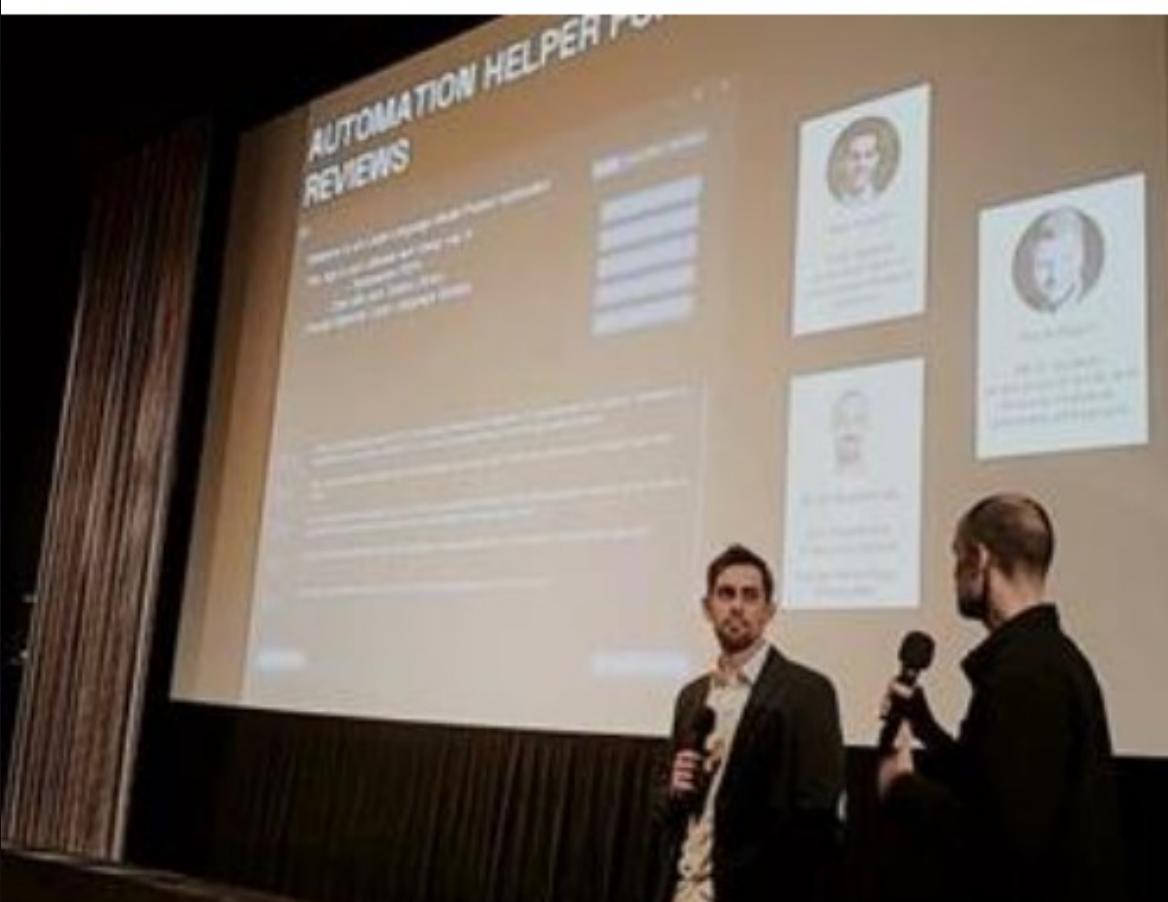


The screenshot shows a GitBook repository interface. At the top, there are three buttons: "Add file ▾", "<> Code ▾", and a green "Use this template ▾" button. A dropdown menu is open under the "Use this template" button, containing the options "Create a new repository" and "Open in a codespace". Below the buttons, the repository details are shown: "c676926 2 min" and "Updated 1 day ago". At the bottom, there is a footer bar with icons for edit, publish, and other repository actions.



Sponsored via GitBook

VDE SPECIAL PRIZE MACHINE LEARNING





COURSES

Fine-Tuning and Deployment
of Large Language Models

Archive

EVENTS

Coding.Waterkant 2023

Prototyping Week

PROJECTS

[How to Start, Complete,
and Submit Your Project](#)

Possible Projects

Past Projects

ADDITIONAL RESOURCES

Glossary

Coursera

Selecting the Optimizer

Choosing the Learning Rate

Learning Linear Algebra

Learning Python

Support Vector Machines

ML Statistics

TOOLS

Git

RStudio

Google Colab

Zoom

How to Start, Complete, and Submit Your Project

In all Machine Learning courses you have:

- to complete a machine learning project in a team of up to 4 participants,
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Starting Your Project

Working on Your Project

Submitting Your Project

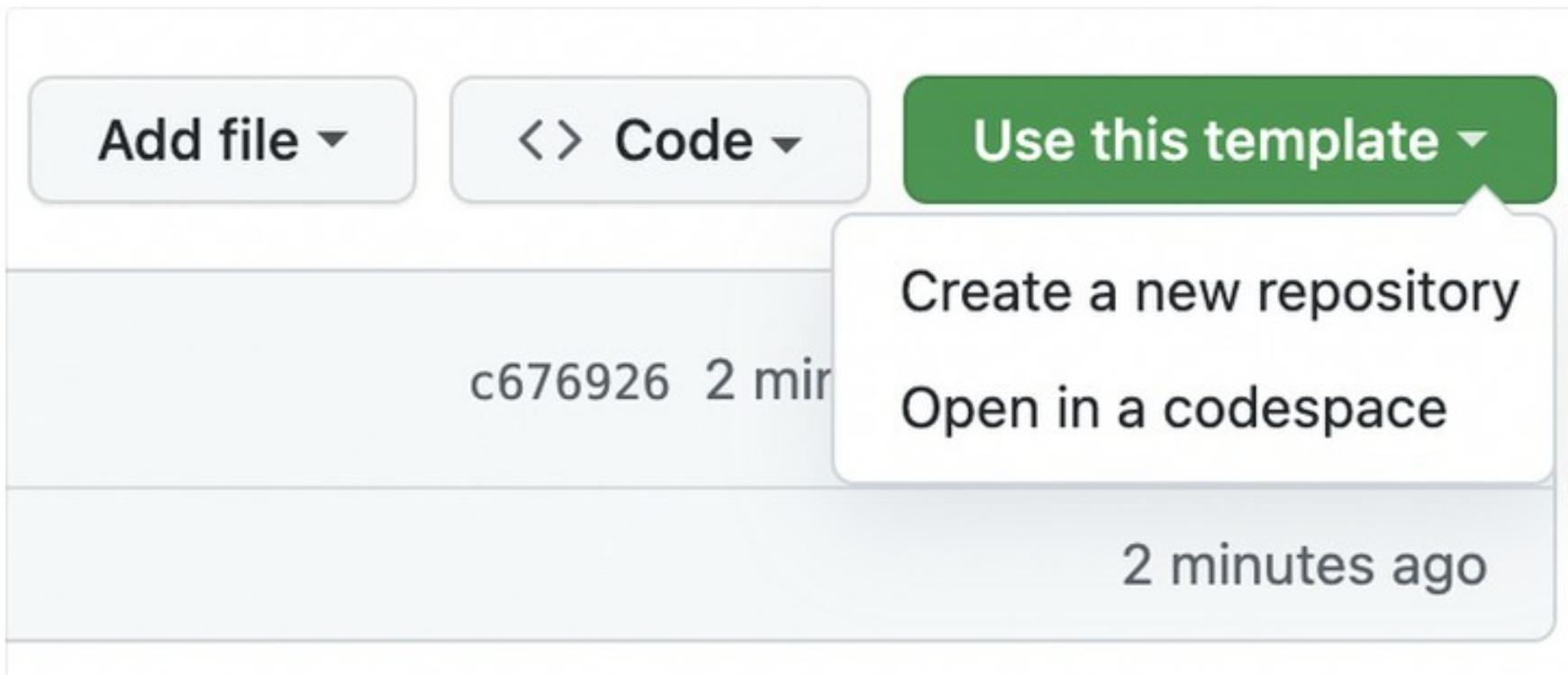
Was this helpful?



Export as PDF

Starting Your Project

1. Navigate to the [Template Repository](#)
2. Use this Template: Above the file list, click the "Use this template" button.



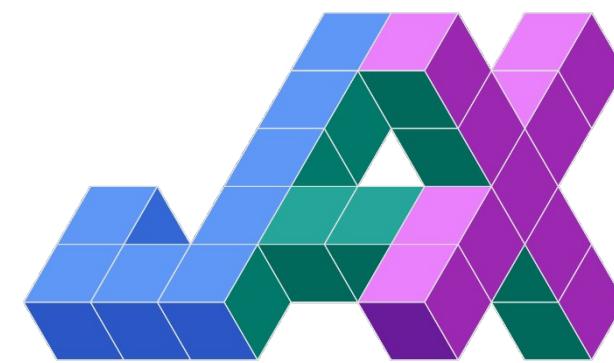
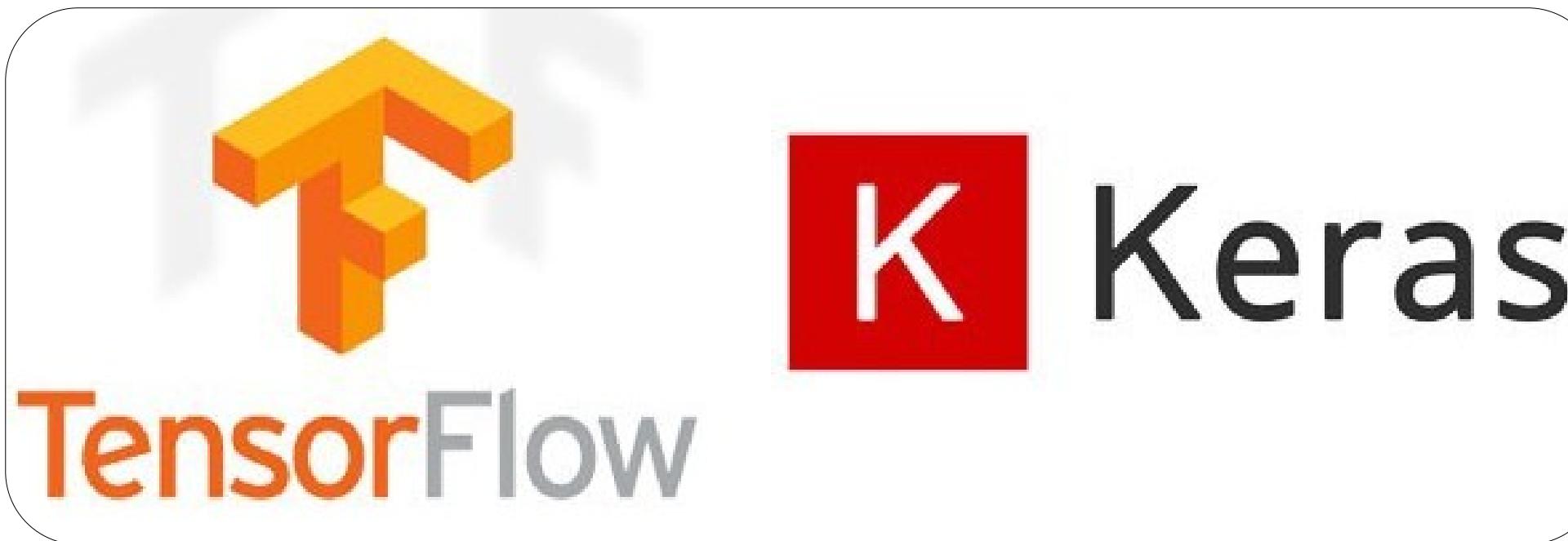
3. Create Repository from Template: You'll be prompted to name your new repository and you can choose whether it should be public or private. You'll also have the option to include all branches in the template repository, if there are more than one.
4. Create Repository: Click "Create repository from template" to create the new repository.
5. Clone the New Repository: You can now clone the new repository to your local machine using `git clone` and start working on your project.

Working on Your Project

The background of the slide is a dark, almost black, surface with intricate, swirling patterns resembling liquid or smoke. These patterns are composed of various shades of dark grey and black, creating a sense of depth and movement.

FIRST PROJECT IDEAS

ML LIBRARIES (LOWER LEVEL)



P Y T  R C H

ML LIBRARIES (HIGHER LEVEL)



Transformers

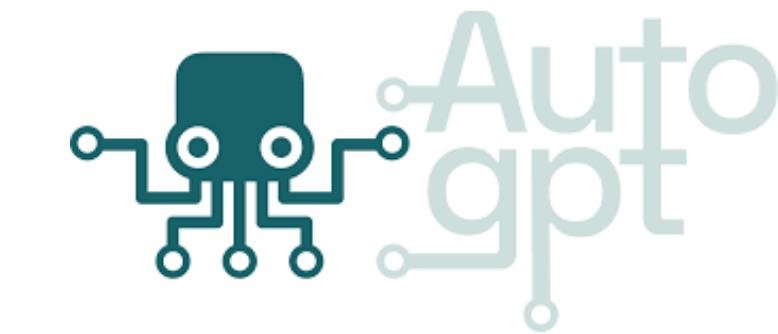
spaCy



LangChain



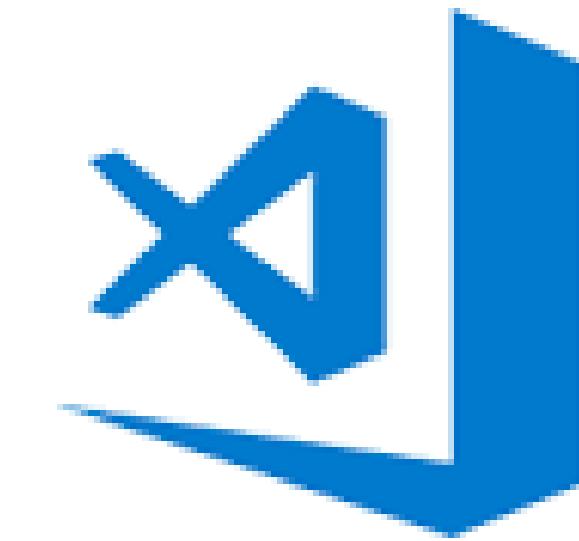
haystack
by deepset



DEVELOPMENT ENVIRONMENTS



Google Colaboratory



Visual Studio Code



PyCharm



TASKS UNTIL NEXT WEEK

- Completion of the learning material provided in the course handbook
- Write about your project interest in the course chat
- Complete the two assignments given in the following notebooks:
 - [Assignment Notebook 1](#)
 - [Assignment Notebook 2](#)
- Bring questions!

| | | | | | |
|-------------------|--|--|--|--|--|
| 23.10.2025 | General Introduction 18:15 - 20:00 ONLINE + Starterkitchen, Kuhnkestr. 6, 24118 Kiel | 27.11.2025 | Individual Feedback Sessions 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE | 18.12.2025 | Individual Feedback Session 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |
| |  Steffen Brandt Referent:in LinkedIn-Profil |  Jake Petersen Referent:in | |  Steffen Brandt Referent:in LinkedIn-Profil | |
| 30.10.2025 | Introduction to TensorFlow for AI, Machine Learning, Part I 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |  Hannes Körner Referent:in |  Lukas Julius Eule Referent:in |  Jeremy von Winckelmann Referent:in LinkedIn-Profil | |
| 06.11.2025 | Introduction to TensorFlow for AI, Machine Learning, Part II 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |  Jake Petersen Referent:in | 04.12.2025 | Natural Language Processing, Part I 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |  Jake Petersen Referent:in |
| 13.11.2025 | Convolutional Neural Networks, Part I 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |  Hannes Körner Referent:in | 11.12.2025 | Natural Language Processing, Part II 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |  Steffen Brandt Referent:in LinkedIn-Profil |
| 20.11.2025 | Convolutional Neural Networks, Part II 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |  Lukas Julius Eule Referent:in | | |  Steffen Brandt Referent:in LinkedIn-Profil |
| | | | | 08.01.2026 | Sequences, Time Series and Prediction 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |
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| | | | | 22.01.2026 | Project Presentations, Part II 18:15 - 20:00 Starterkitchen, Kuhnkestr. 6, 24118 Kiel + ONLINE |