16.04.25

OPENCAMPUS.sh

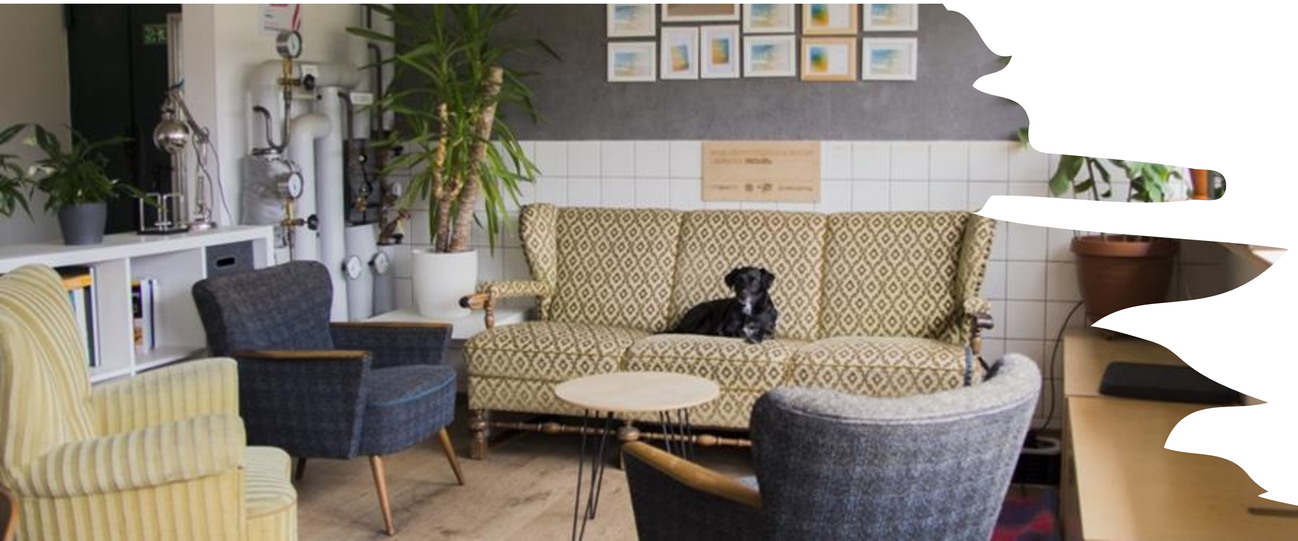
Advanced Time Series Prediction

GENERAL INTRODUCTION

- Personal Introduction
- Intro to opencampus.sh
- Organizational Matters
- Course Projects
- ML Frameworks

OPENCAMPUS.sh

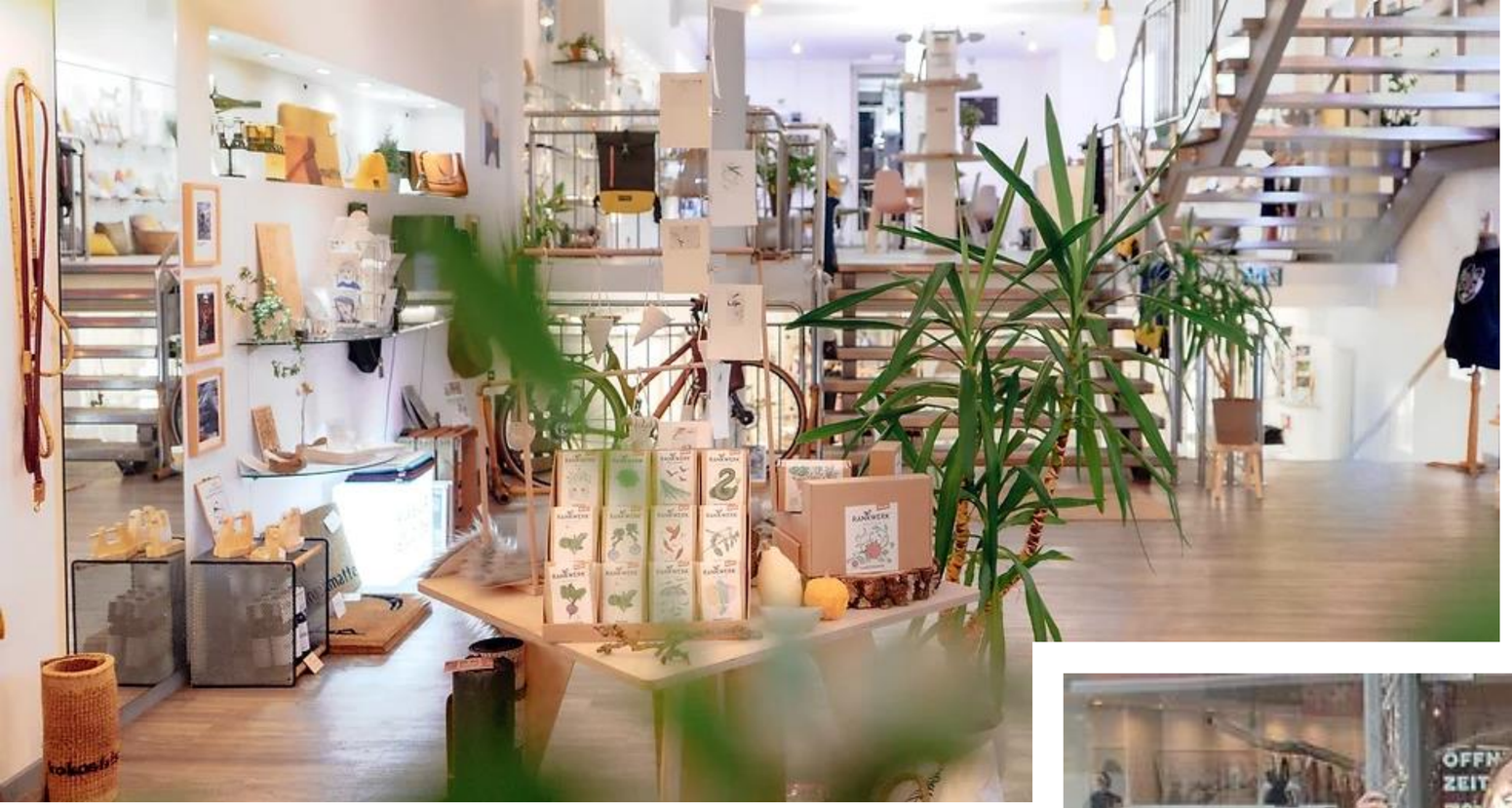
- Nonprofit organization which oversees a variety of initiatives
- Offering a wide range of educational opportunities, support, and networking for entrepreneurs, creatives, and anyone curious, regardless of age, educational background, or origin
- The services are open to everyone and mostly free.
-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



starter kitchen.de

COBL

COZY WORKING, CULTURE & EVENTS

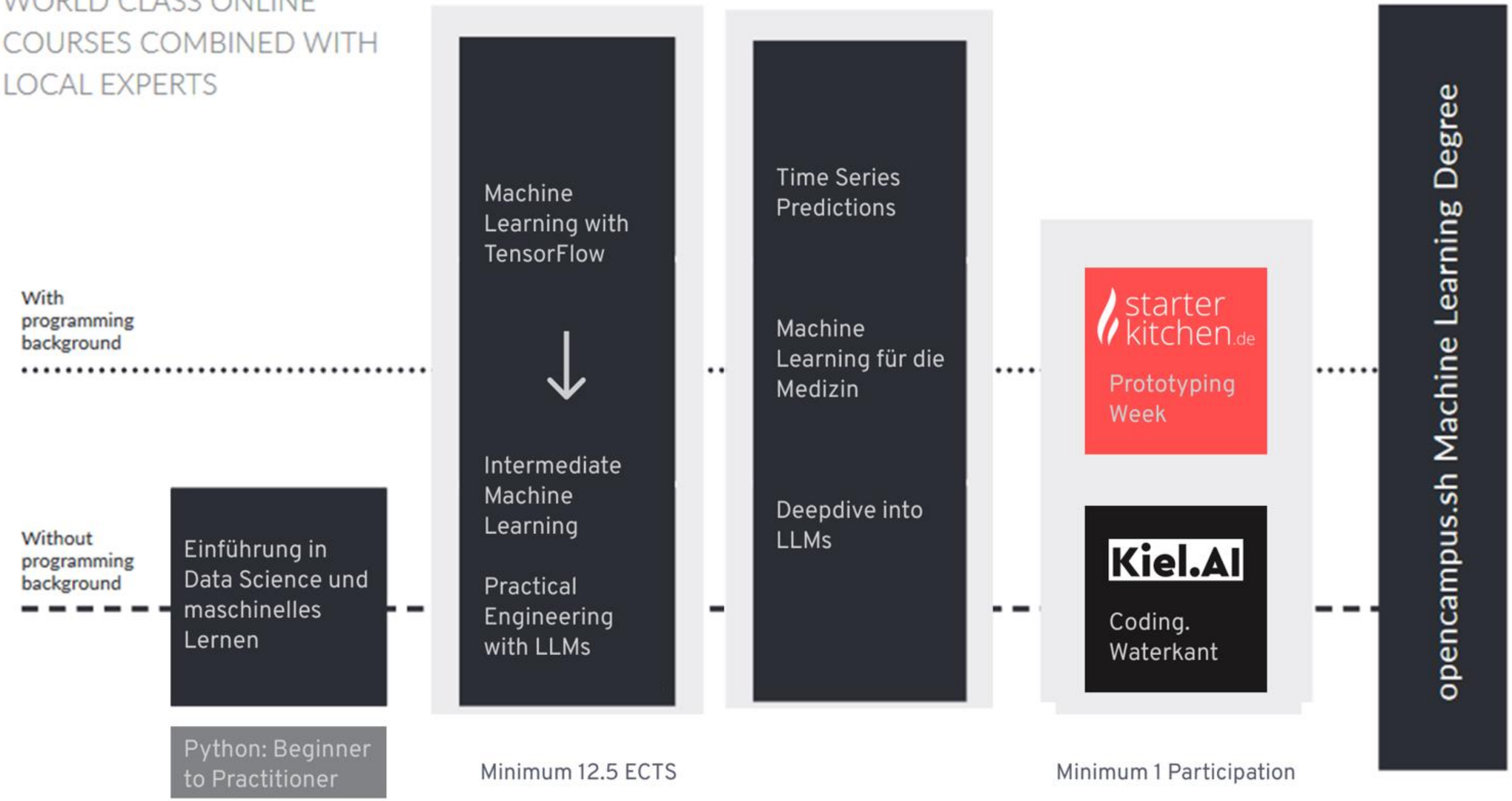


KOSMOS
by opencampus.sh

FABLAB KIEL

MACHINE LEARNING **DEGREE**

WORLD CLASS ONLINE COURSES COMBINED WITH LOCAL EXPERTS




Waterkant Festival
25
19. – 20. Juni
MFG 5 Kiel

Monday, July 7

Coding.Waterkant 2025

https://kiel.ai

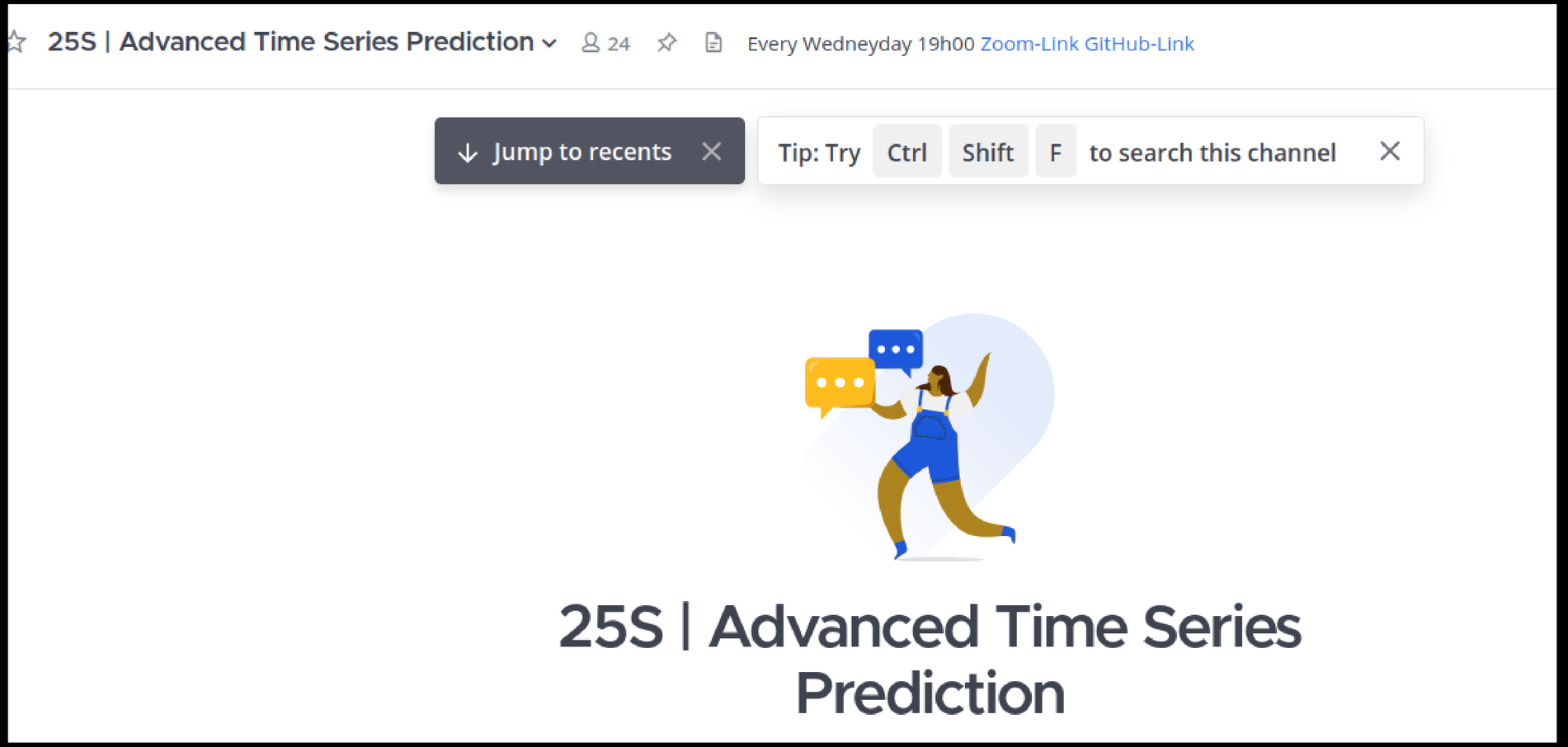
ML Degree Meetup Coding.Waterkant Chat

Kiel.AI

OPENCAMPUS.sh

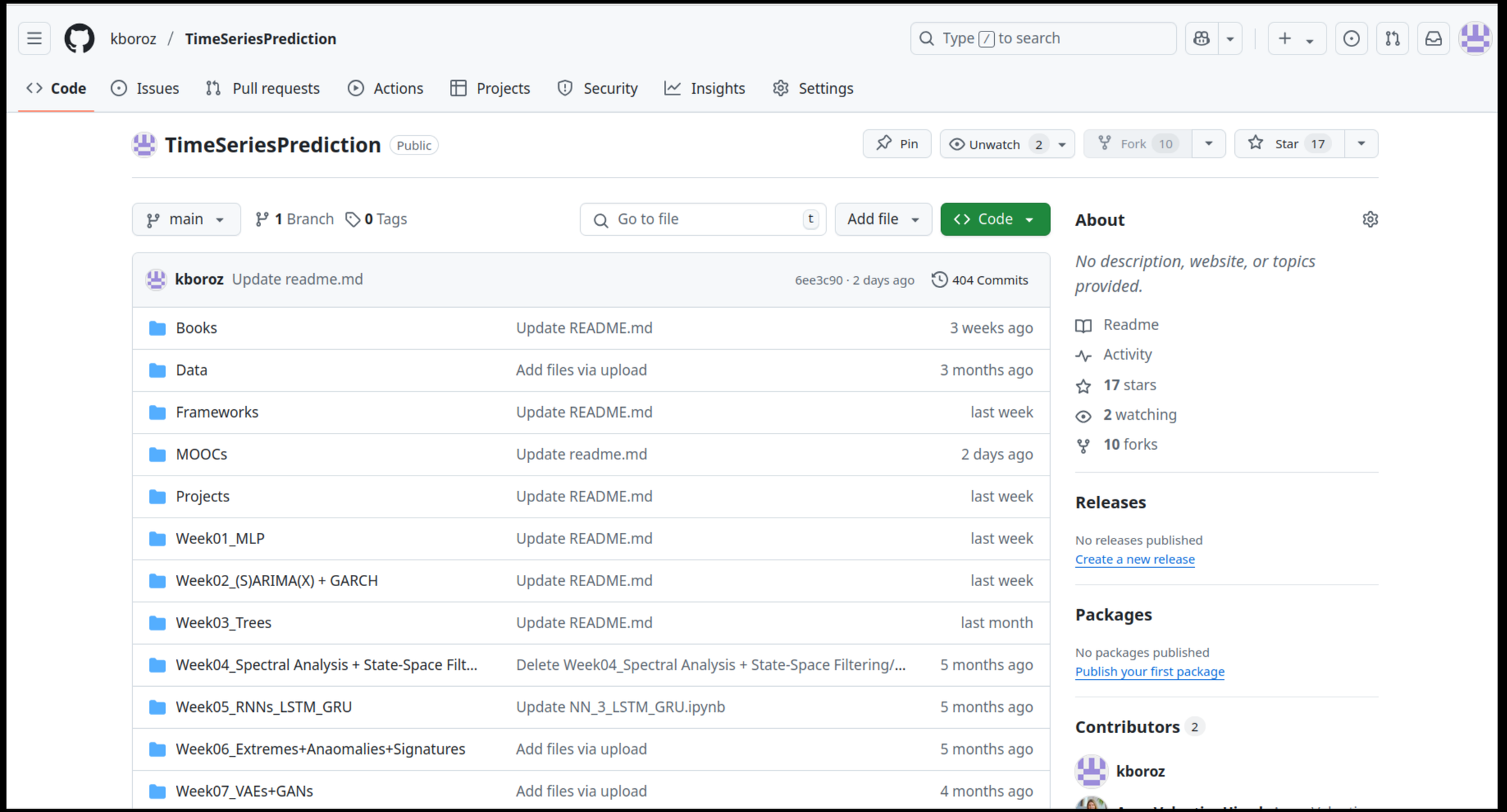
DiWiSH
DIGITALE WIRTSCHAFT
SCHLESWIG-HOLSTEIN
CLUSTERMANAGEMENT

MATTERMOST-CHAT



- Please, ask questions in the chat

COURSE GITHUB-REPO



ORGANIZATIONAL MATTERS

- **Use your full names in the zoom meetings!**
- **Please write us if you will not go on with the course!**

Kurstermine

16.04.2025 19:00 - 20:30	Introduction + Time Series Data Processing for MLP [Link wird hier in Kürze bereitgestellt]
23.04.2025 19:00 - 20:30	Project allocation & Time series fundamentals: (S)ARIMA(X) + GARCH [Link wird hier in Kürze bereitgestellt]
30.04.2025 19:00 - 20:30	Trees: From Random Forests to XGBoost/LightGBM/CatBoost [Link wird hier in Kürze bereitgestellt]
07.05.2025 19:00 - 20:30	Spectral Analysis + State-Space-Filtering [Link wird hier in Kürze bereitgestellt]
14.05.2025 19:00 - 20:30	Recurrent Neural Networks: LSTM, GRU [Link wird hier in Kürze bereitgestellt]
21.05.2025 19:00 - 20:30	Extremes & Anomalies + Signatures [Link wird hier in Kürze bereitgestellt]
28.05.2025 19:00 - 20:30	VAEs + GANs [Link wird hier in Kürze bereitgestellt]
04.06.2025 19:00 - 20:30	Copula + Gaussian Processes + Random Matrix Theory [Link wird hier in Kürze bereitgestellt]
11.06.2025 19:00 - 20:30	Transformers & TFTs [Link wird hier in Kürze bereitgestellt]
18.06.2025 19:00 - 20:30	NBEATS + NHITS + xLSTMs [Link wird hier in Kürze bereitgestellt]
25.06.2025 19:00 - 20:30	Temporal Networks and Graphs [Link wird hier in Kürze bereitgestellt]
02.07.2025 19:00 - 20:30	LLMs for Time Series Prediction [Link wird hier in Kürze bereitgestellt]
09.07.2025 19:00 - 20:30	Final Presentations [Link wird hier in Kürze bereitgestellt]

Coding - Waterkant

EXERCISES

- Each week every group will present exercises/notebooks
- We will split the tasks in groups
- Each of you presents at least once

PROJECTS

Finance/Economics:

Energy:

Environment:

Medical:

Engineering:

PROJECTS

How to Start, Complete, and Submit Your Project

In all Machine Learning courses you have:

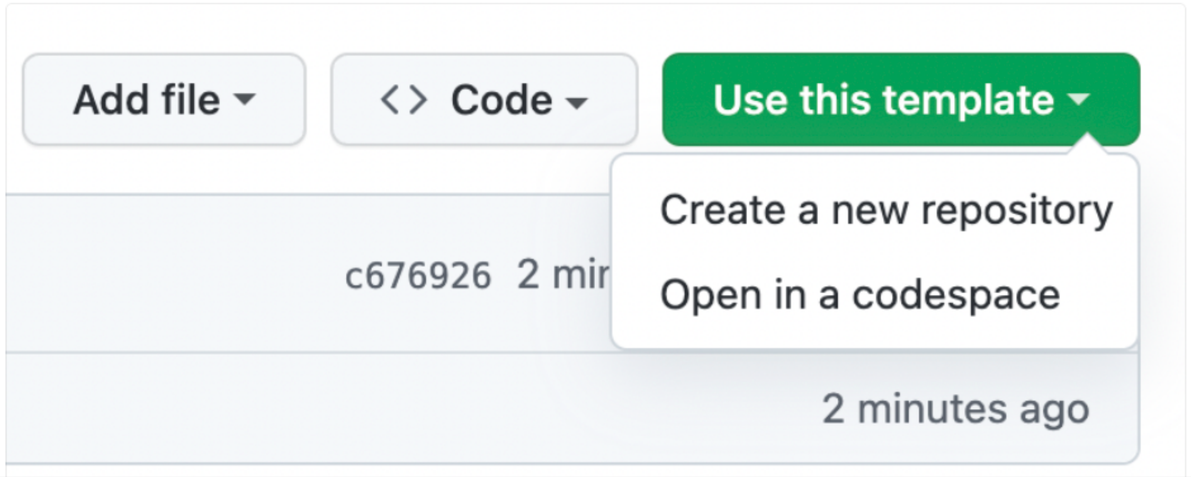
- to complete a machine learning project in a team of up to 4 participants,
- attend at least all but 2 sessions of the course, and
- use the provided project template repository for documentation (unless otherwise instructed).

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.

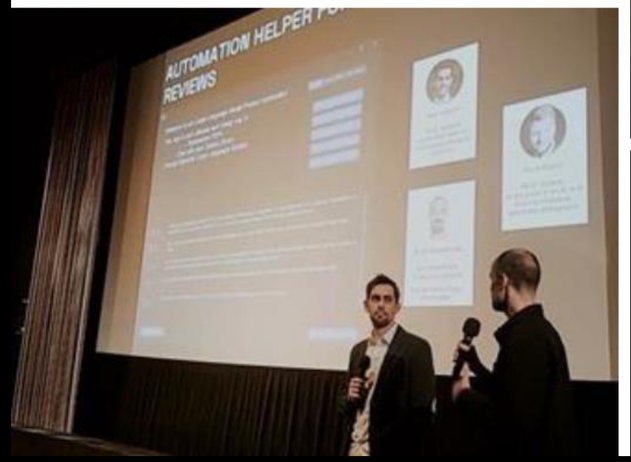


RELEVANCE OF THE PROJECTS

- 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 prize

VDE

SPECIAL PRIZE MACHINE LEARNING



PROJECT TOOLS

DEVELOPMENT ENVIRONMENTS

TASKS UNTIL NEXT WEEK

- Watch the videos for week 1:
  - Try some coding experiments...
  - Who presents?
- Choose your project:
  - write your name in the "Mattermost"-Chat
  - Bring questions!