

17.04.25



Machine Learning With TensorFlow

GENERAL INTRODUCTION

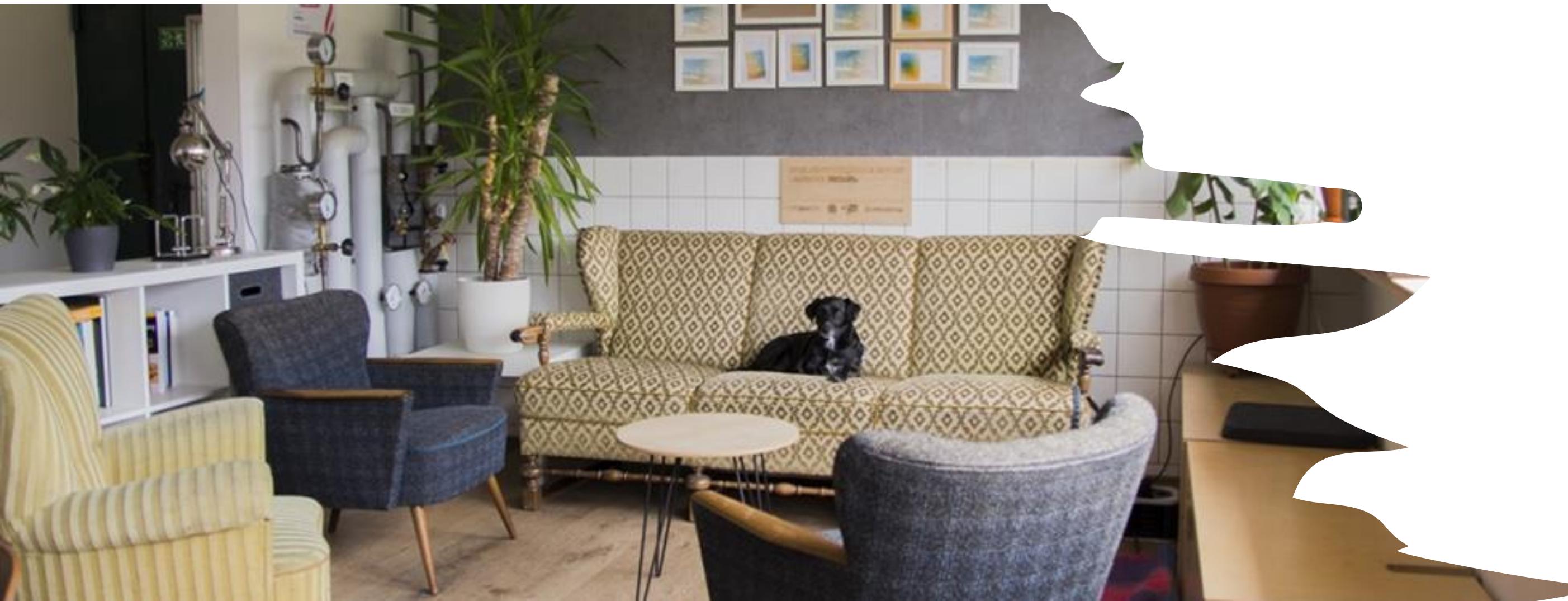
- **Introduction of the Instructors**
- **Intro to opencampus.sh**
- **Organizational Matters**
- **Introductory Discussion on AI**
- **Coursera Registration**
- **Course Projects**
- **ML Frameworks**

INTRODUCTION OF THE INSTRUCTORS



- 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.



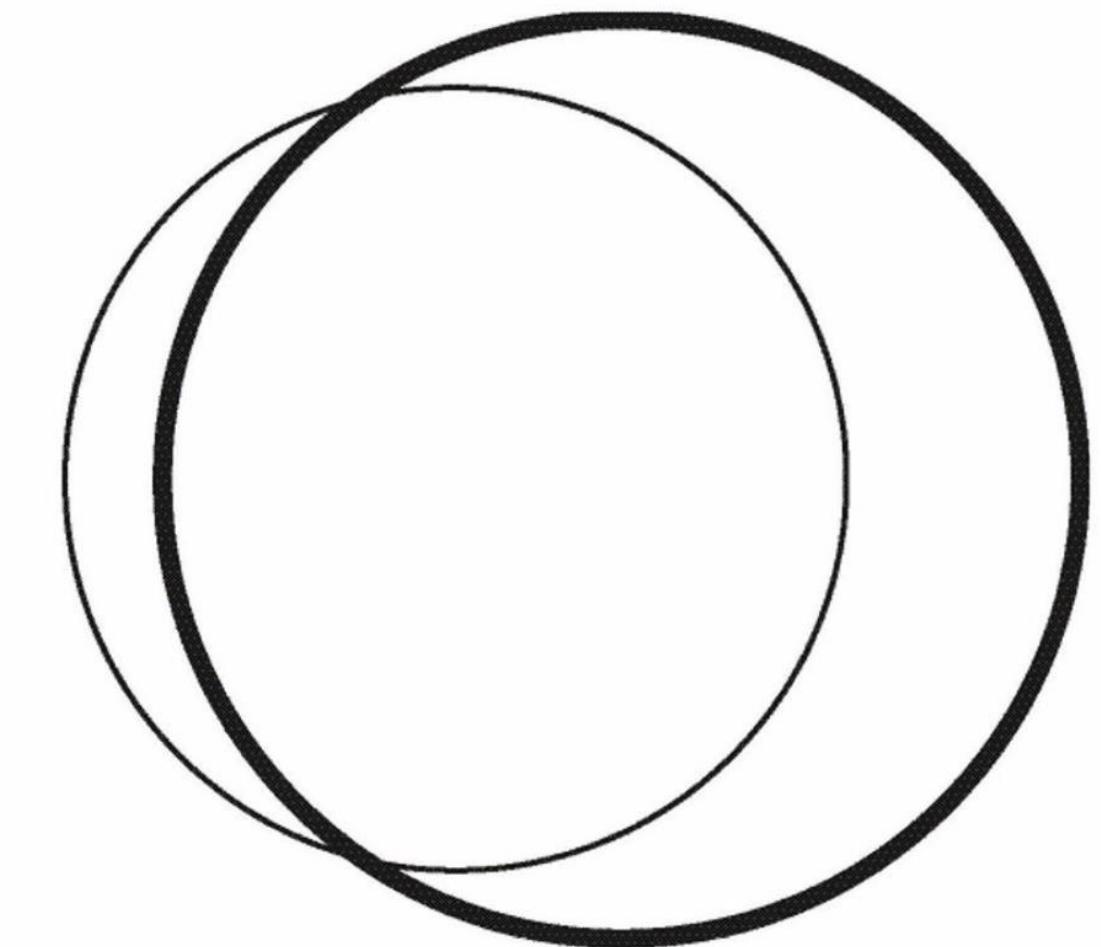




Cobl

COZY WORKING, CULTURE
& EVENTS





KOSMOS

by opencampus.sh





FABLAB KIEL



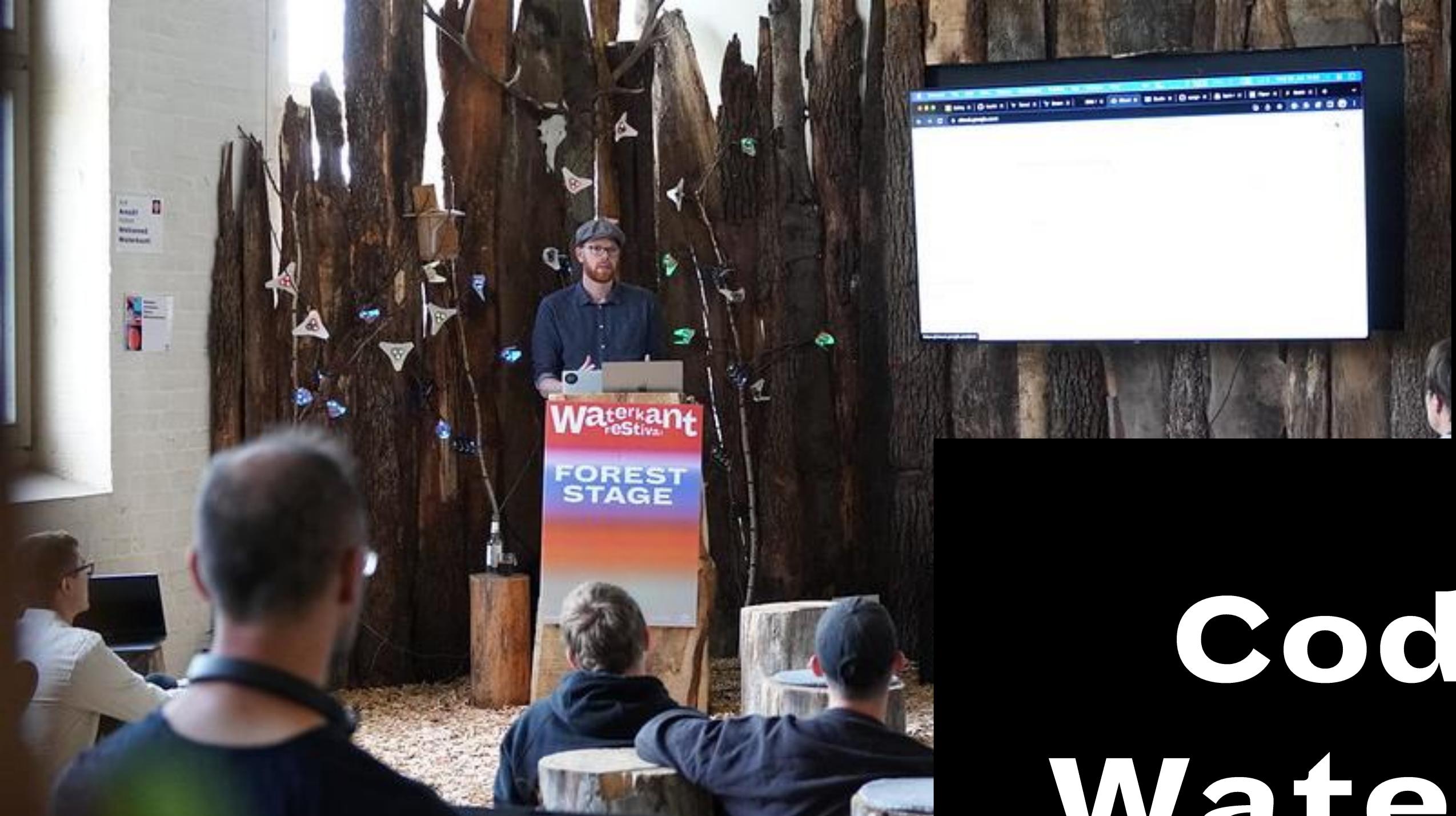
Diving into AI and Machine Learning at the Water's Edge.

steffen@opencampus.sh

SUBSCRIBE

<https://coding.waterkant.sh>

Coding. Waterkant 2025



Coding.Waterkant

2025

July 07 - 11

- **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!**

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 for the channel **C_Machine Learning With TensorFlow**. A yellow arrow points to the pinned post at the top of the channel page.

Pinned Post: **C_Machine Learning With TensorFlow** (March 25)
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

Channel Header: C_Machine Learning With TensorFlow (Tuesday, 4-6 p.m.: Zoom; Course Handbook)

Left Sidebar: sose21 @steffen, 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

Right Sidebar: Pinned Posts, Search, @, ⌂, March 25, C_Machine Learning With ...

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 bar and a yellow arrow pointing to it from the left.

Window size when screen sharing:

- Fullscreen mode
- Maximize window
- Maintain current size

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

Video Controls (Bottom Left):

- Select a Camera (Alt+N to switch):
 - NewTek NDI Video
 - ✓ Integrated Camera
- Choose Virtual Background...
- Choose Video Filter...
- Video Settings... (highlighted with a blue bar and a yellow arrow)

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

Coding. Waternkant

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
[LinkedIn-Profil](#)



Steffen Brandt
speaker
[LinkedIn-Profil](#)

PROJECTS MILESTONES

- 24.04. **Project Pitches**
- 01.05. **Further Project Proposals and Discussions in Mattermost**
- 08.05. **Form Groups**
- 15.05. **Literature Review (*Submission Deadline: 18.05.*)**
- 22.05. **Dataset Characteristics**
- 05.06. **Definition of Model Evaluation**
- 12.06. **Baseline Model Estimation (*Submission Deadline: 15.06.*)**
- 22.06. **Individual Feedback Sessions**
- 03.07. **Project Presentations, Part I**
- 10.07. **Project Presentations, Part II**

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

//

DO NOT SIGN UP FOR THE SPECIALIZATION

For Individuals For Businesses For Universities For Governments

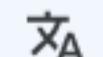
coursera Explore ▾ What do you want to learn? 

Online Degrees ▾ Find your New Career Log In **Join for Free**

Home > Browse > Data Science > Machine Learning

 DeepLearning.AI

DeepLearning.AI TensorFlow Developer Professional Certificate

 Taught in English | [8 languages available](#) | Some content may not be translated

 Instructor: [Laurence Moroney](#)

 Financial aid available

186,170 already enrolled

Professional Certificate - 4 course series
Earn a career credential that demonstrates your expertise

4.7 ★ (20,734 reviews)

Intermediate level
No previous experience necessary

2 months at 10 hours a week

Flexible schedule
Learn at your own pace

[View all courses](#)

A large red arrow points upwards from the "View all courses" button towards the "Join for Free" button in the top right corner.

About Outcomes Courses Testimonials

CLICK ON THE INDIVIDUAL COURSE

Professional Certificate - 4 course series

TensorFlow is one of the most in-demand and popular open-source deep learning frameworks available today. The DeepLearning.AI TensorFlow Developer Professional Certificate program teaches you applied machine learning skills with TensorFlow so you can build and train powerful models.

[Read more](#)

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning

Course 1 • 17 hours • 4.8 ★ (18,883 ratings)

What you'll learn

- ✓ Learn best practices for using TensorFlow, a popular open-source machine learning framework
- ✓ Build a basic neural network in TensorFlow
- ✓ Train a neural network for a computer vision application
- ✓ Understand how to use convolutions to improve your neural network

Skills you'll gain

Computer Vision Tensorflow Machine Learning

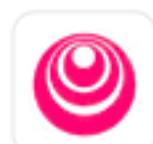
Convolutional Neural Networks in TensorFlow

Course 2 • 16 hours • 4.7 ★ (7,912 ratings)

Instructor

 **Laurence Moroney**
DeepLearning.AI
15 Courses • 456,481 learners

Offered by

 **DeepLearning.AI**
[Learn more](#)

ENROLL FOR INDIVIDUAL COURSE

For Individuals For Businesses For Universities For Governments

coursera Explore ▾ What do you want to learn? 

Online Degrees ▾ Find your New Career Log In **Join for Free**

Home > Browse > Computer Science > Software Development

 DeepLearning.AI

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning

This course is part of [DeepLearning.AI TensorFlow Developer Professional Certificate](#)

 Taught in English | [8 languages available](#) | Some content may not be translated

 Instructor: [Laurence Moroney](#)

Enroll for Free
Starts Oct 20

Financial aid available

350,206 already enrolled

Course
Gain insight into a topic and learn the fundamentals

4.8 ★ (18.883 reviews) |  96%

Intermediate level
Recommended experience [\(i\)](#)

17 hours (approximately)

Flexible schedule
Learn at your own pace

[View course modules](#)



SELECT AUDIT MODUS

The screenshot shows the Coursera website interface. At the top, there are navigation links for "For Individuals", "For Businesses", "For Universities", and "For Governments". The main search bar contains the placeholder "What do you want to learn?". On the right side of the header, there are links for "Online Degrees", "Find your New Career", "English", and a user profile for "Steffen als Student". Below the header, the breadcrumb navigation shows the path: Home > Browse > Data Science > Machine Learning.

The main content area displays the course details for "Stanford Supervised Machine Classification". The course title is prominently displayed in large red and grey text. Below the title, it says "This course is part of [Machine Learning Specialization](#)". It also indicates that the course is taught in English and available in 8 languages. The instructors listed are Andrew Ng and others, with one being a "Top Instructor". A blue button labeled "Enroll for Free" with the note "Starts Oct 20" is visible. The enrollment count is shown as "454,312 already enrolled".

A modal window is overlaid on the page, titled "7-day Free Trial". It explains that the course is part of a larger specialization and lists five benefits with checkmarks:

- Unlimited access to all courses in the Specialization
- Cancel anytime.
- \$45 per month to continue learning after trial ends.
- Certificate when you complete.

Below the modal, a red arrow points to the "Audit the course" link in the footer menu, which includes "About", "Outcomes", "Modules", and "Audit the course".

EXERCISES

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

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

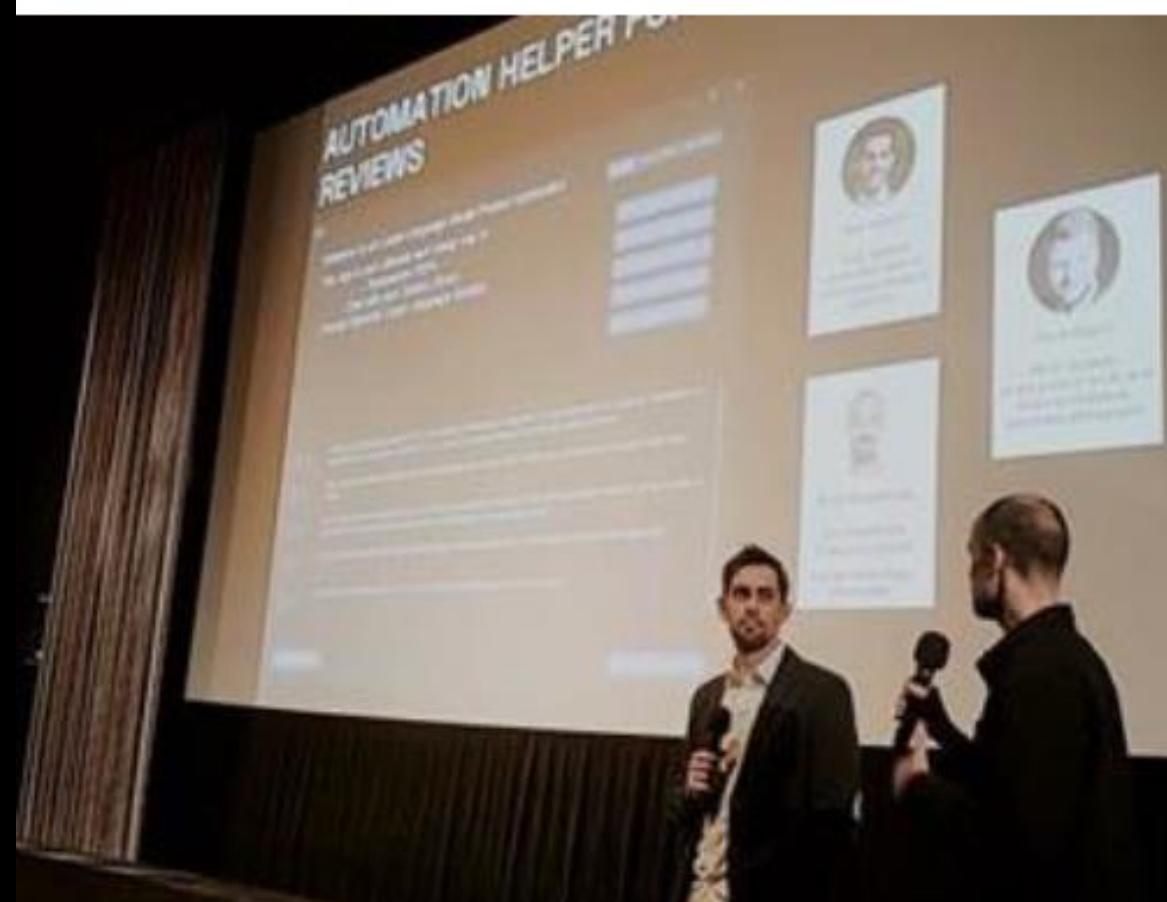
PROJECTS

- Bring your own idea and data
- First look for a problem, then look for data
- Good approach is to look for time consuming or boring tasks humans are dealing with

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**

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,
- 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

Working on Your Project

Submitting Your Project

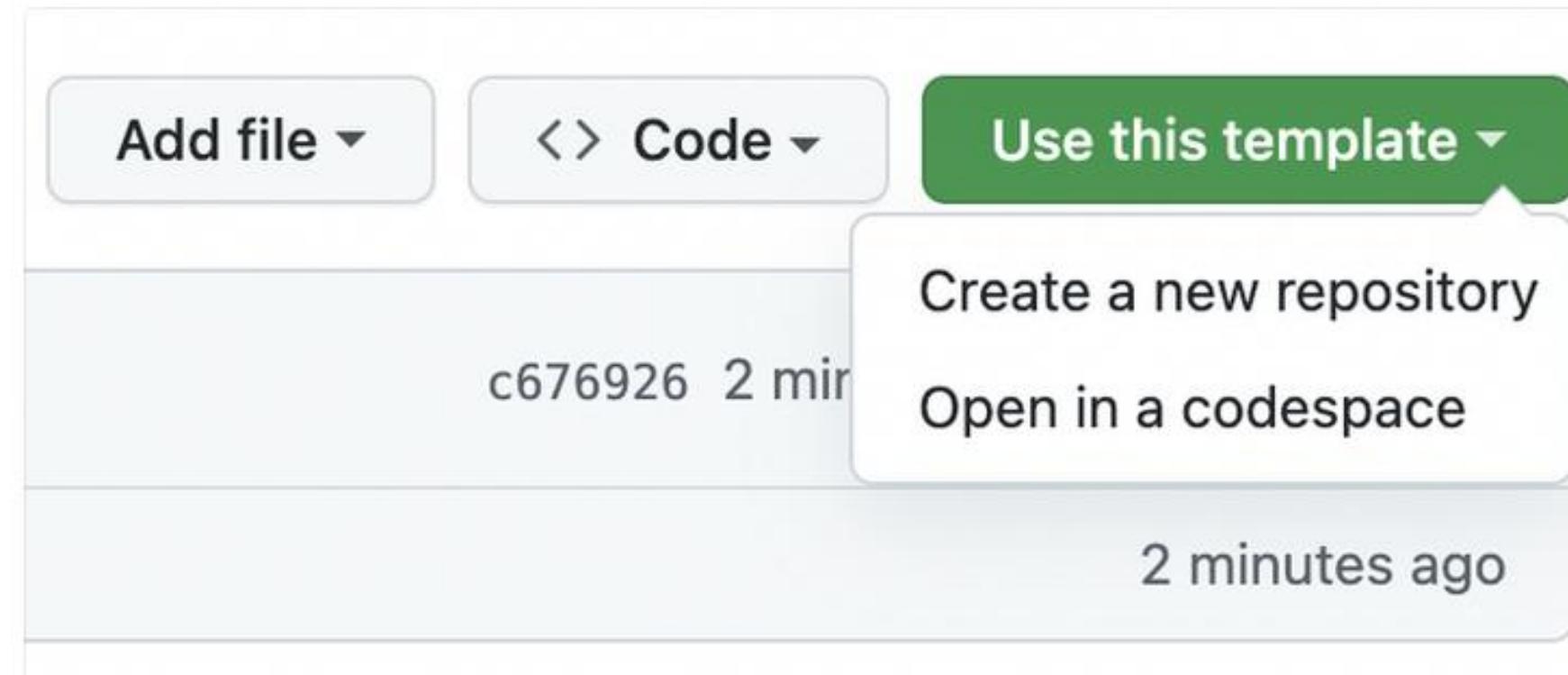
Was this helpful?



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.



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

PROJECT INTERESTS



Institut
Louis
Bachelier



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

Welcome to the Challenge Data website!!

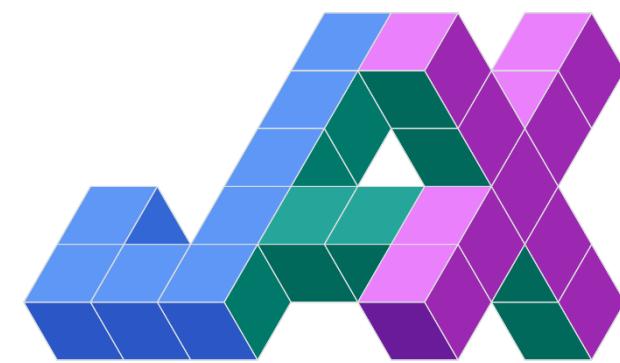
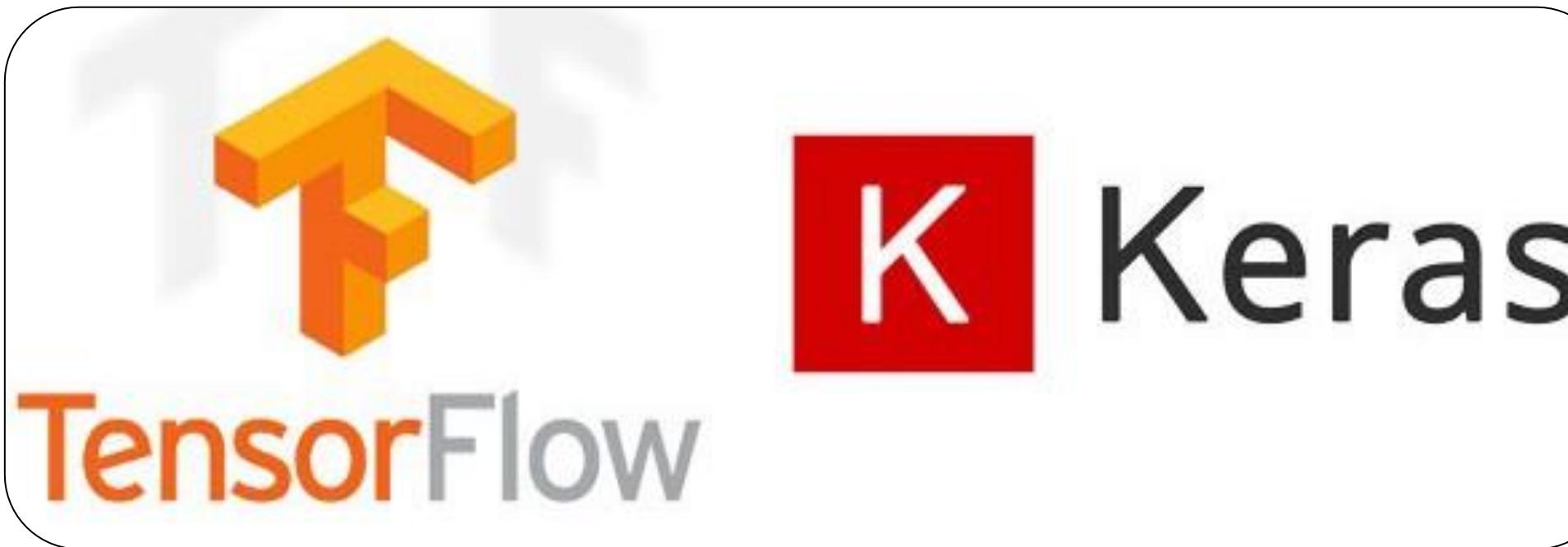
Each year, we organize machine learning challenges from data provided by public services, companies and laboratories: [general documentation](#) and [FAQ](#). Seasons begin in January; the challenges are introduced in the context of Stéphane Mallat's lesson at the Collège de France.

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.

ML LIBRARIES (LOWER LEVEL)



P Y T  R C H

ML LIBRARIES (HIGHER LEVEL)



Transformers

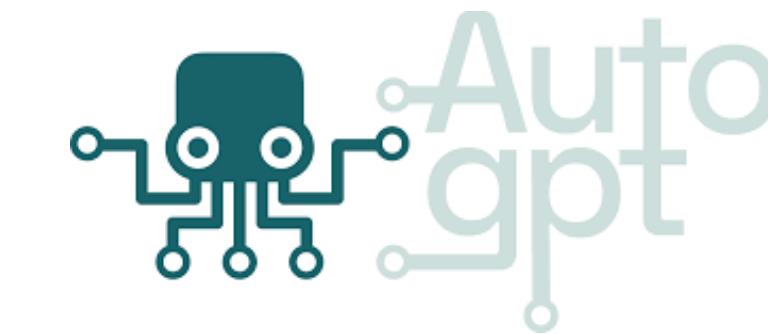
spaCy



LangChain



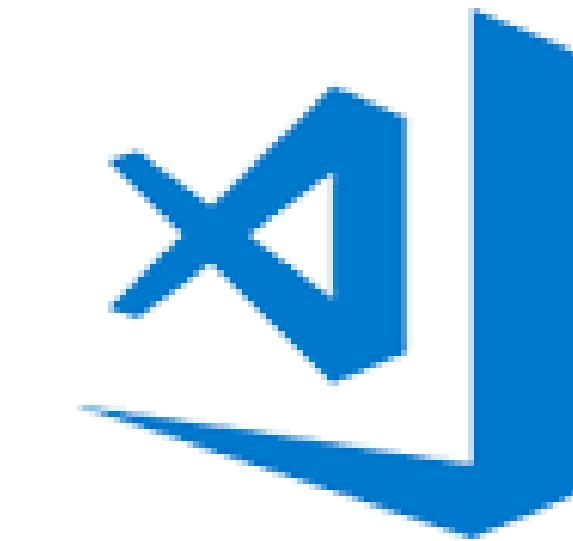
haystack
by deepset



DEVELOPMENT ENVIRONMENTS



Google Colaboratory



Visual Studio Code



TASKS UNTIL NEXT WEEK

- Completion of the learning material of week 1 and 2 of the course "introduction to TensorFlow"
- Complete the two assignments given in the following notebooks:
 - [Assignment Notebook 1](#)
 - [Assignment Notebook 2](#)
- Bring questions!