

Elements of Machine Learning & Data Science

Winter semester 2025/26

Introduction & Administrative Details

20.10.2025

Prof. Bastian Leibe

Organization

- **Lecturer this semester**
 - Bastian Leibe Machine Learning
 - **Lecturers in other years**
 - Wil van der Aalst Data Science
 - Holger Hoos AI Methodology
 - **Main Assistants**
 - Karim Abou Zeid (abouzeid@vision.rwth-aachen.de)
 - Ilya Fradlin (fradlin@vision.rwth-aachen.de)
 - Christian Schmidt (schmidt@vision.rwth-aachen.de)



Language

- Official course language will be English.
 - The entire AI literature is in English, and this course will prepare you for it.
 - Some of the tutors are international Master students.
- **However,...**
 - We want to make it as easy as possible for you to follow the lecture.
 - Please tell us when we are talking too fast or when we should repeat something in German for better understanding!
 - You may at any time during the lecture ask questions in German!

Course Structure

- **Structure:** 3V (lecture) + 2Ü (exercises)
 - 6 EECS credits
 - Mandatory lecture for Bachelor Computer Science (5th semester)
- **Place & Time**
 - Lecture: Mon 16:30 – 18:00 TEMP1
 - Lecture: Tue 08:30 – 10:00 TEMP2
 - Small-group exercises on Tue, Wed, Thu, Fri
 - Plenary exercise: Thu 12:30 – 14:00 TEMP2
- **Lecture format**
 - The lecture will be held [in presence](#).
 - [Lecture recordings](#) and/or [supplementary videos](#) will be made available [on moodle](#).
 - Small-group exercises will be held [in person](#).

Electronic Learning Room

Communication

- **Moodle learning room**
 - Register to the lecture on RWTHOnline to get access.
 - *This will be our prime communication channel to you!*
- **Use the forum**
 - If you have a question about course organization or content, please ask it in the corresponding forum.
 - *We will monitor the fora and answer questions there.*

Elements of Machine Learning and Data Science (VU) [23ws-12.00034]

Kurs Einstellungen Teilnehmer*innen Bewertungen Berichte Mehr ▾

▼ Allgemeines

[Alles einklappen](#)

 Announcements

 Administrative Questions

 Content-related Questions and Discussions

 Discussions on Group Formation

Electronic Learning Room

Materials

- **For each lecture, you will find**
 - The lecture date and topic
 - The instructor
 - *A zoom link if we have to switch to an online mode in case of COVID*
- **Additional materials**
 - A pdf of the lecture slides
 - (In some cases) supplementary, pre-recorded videos
 - Video recordings (several days after the lecture)

▼ Lecture 1: Introduction & Organization (10.10.2023, all instructors)

 EleMLDS-ws23-part01-intro.pdf	5.9 MB Hochgeladen 10.10.2023 13:23	<button>Als erledigt kennzeichnen</button>
 EleMLDS-ws23-part01-intro-6on1.pdf	1.4 MB Hochgeladen 10.10.2023 13:24	<button>Als erledigt kennzeichnen</button>

Materials *bridgingAI*

- **Companion MOOCs**
 - We have created two MOOCs to complement this lecture
 - Basics of ML
 - Basics of Data Science
 - Target: International Master students and students from other degree programs joining Computer Science
 - *We will provide videos from those MOOCs as supplementary material wherever they fit.*
- **We will sometimes experiment with an inverted classroom format**
 - I.e., we will upload videos in advance and expect you to watch them ahead of the lecture
 - *This will be announced well in advance*



bridgingAI
Basics of Machine Learning

Introduction
Motivation

Prof. Bastian Leibe



bridgingAI
Basics of Data Science

Introduction to Data Science
Introduction

Prof. Wil van der Aalst

Exercise Sheets

- **Exercise concept**
 - Typically, 1 exercise sheet every week
 - Hands-on experience with the algorithms from the lecture.
 - Both pen-and-paper and programming exercises (in python/numpy)
 - **Exam admission requirement:** Need to reach 50% of exercise points
- **Team submission**
 - Please sign up for exercise slots and form teams of 4 participants for the exercises.
 - Each team should only turn in one solution.
 - Submission via moodle, listing the team members.
 - *Forum on moodle where you can look for team members*

Small Group Exercises

Monday	Tuesday	Wednesday	Thursday	Friday
		1x 08:30-10:00h	3x 08:30-10:00h	
			1x 10:30-12:00h	
	2x 12:30-14:00h			2x 12:30-14:00h
				3x 14:30-16:00h
		2x 16:30-18:00h	4x 16:30-18:00h	2x 16:30-18:00h

- **Weekly small-group exercises**
 - Exercise sheets will be given out on Fridays at 20:00h.
 - Small-group sessions with tutors will show you *how to solve similar exercises*.
 - Turn in your team's solutions via moodle by the specified deadline.
 - Exercises will be corrected by tutors, points will be tallied via moodle.
 - *We will set up a moodle poll to collect your preferences for exercise time slots*

Exam

- **Exam admission requirement**
 - Need to reach at least 50% of exercise points to qualify
- **Tentative exam dates**
 - 1st exam: **Wed** **11.02.2026**, 17:30 – 19:00
 - 2nd exam: **Fri** **20.03.2026**, 15:30 – 17:00
 - The exam will cover the material from lectures and exercises.
 - Written exam, “closed book”
- **Disclaimer**
 - *Please also check RWTHOnline. Only the dates and times on RWTHOnline are binding.*

Exam Registration

- **Registration via RWTHOnline**
 - Exam registration will be opened on 15.11.2025
 - Please note the deadlines!
 - [15.01.2026](#) for the 1st exam
 - [13.03.2026](#) for the 2nd exam
 - Withdrawal is possible until 3 days before the exam
 - *Take care to register by the deadline. Late registration cannot be accommodated!*