

# Machine Learning and Data Mining

## WISE 2024-25

### Course Logistics

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# General Organisational Information

- ▶ **Course ID:** 0432028.
- ▶ **Aim:** Understanding the fundamentals and basics of machine learning and data mining.
- ▶ **For whom it is intended:**
  - ▶ Master students in Web and Data Science
  - ▶ Computer Science
  - ▶ Computer Visualistics
  - ▶ Mathematical Modelling, etc.



▶ **Lecture and Tutorial coordinator:**

- ▶ Dr. Ing. Stefania Zourlidou

▶ **Course Assistant:**

- ▶ Renesa Ray



- ▶ **Where:** In room D 028.
- ▶ **When:** On Mondays from 14:00-16:00.
- ▶ A couple of lectures will also be given on Thursdays in room F314, from 14:00 to 16:00. You will be informed about it in advance through the Forum (OLAT) and Lecture.



## Tutorials

- ▶ **In Tutorials:** We explain the solutions of the last given assignment.
- ▶ **Where and When?** On Thursdays in room F314 from 14:00-16:00.



- ▶ Use the Forum in OLAT, for questions regarding the course.
- ▶ Check regularly the Forum for announcements.
- ▶ Join the tutorial session on Thursdays.
- ▶ Email: **strictly** for urgent situations.



# Material and Further Information

- ▶ OLAT:  
<https://olat.vcrp.de/url/RepositoryEntry/4653613056>
- ▶ Slides, Further Readings and Assignments.



# Assignments

- ▶ You can find the assignments in OLAT under the **Assignments** menu.
- ▶ An assignment typically comprises three sections:
  - ▶ Knowledge Questions
  - ▶ Practical Problems
  - ▶ Programming Problems
- ▶ Assignments are optional and will not be submitted for corrections or grading.
- ▶ It is highly recommended that students solve the assignments to enhance their understanding of the lecture material.
- ▶ Solutions to the assignments will be explained during Thursday's tutorial.





- ▶ **How:** Written
  - ▶ Remember to register for the exam!
- ▶ **Where:** Check on Klips website a few weeks before the exam
- ▶ **When:**
  - ▶ 1st exam: 05.03.2025 (verify on Klips)
  - ▶ 2nd exam: 25.03.2025 (verify on Klips)



# Exam Eligibility

- ▶ In Week 51, an assignment will be released on OLAT. This assignment will cover various machine learning topics discussed since the beginning of the course.
- ▶ You need to submit it within the given period.
- ▶ A passing grade is 50%, which grants you eligibility to sit for the exams.



# Prerequisites

- ▶ The fundamental concepts of Algebra
- ▶ The fundamental concepts of Calculus
- ▶ The fundamental concepts of Probability Theory
- ▶ The fundamental concepts of Statistics
- ▶ Programming skills (i.e., Python)

# Course Success Checklist

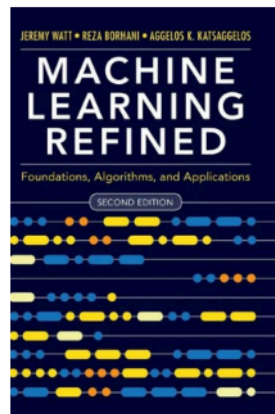


Maximize your course success by:

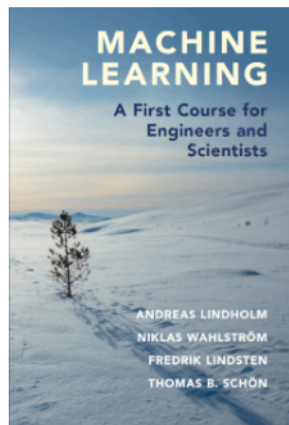
- ▶ Attending lectures and tutorials regularly.
- ▶ Actively using the provided learning materials.
- ▶ Completing and thoroughly understanding each assignment.
- ▶ Starting exam preparation early for the best results.
- ▶ Ensuring you register for exams on time.

Keep in mind: **Success comes from effort, and preparation is key!**

- ▶ The book "*Machine Learning Refined*" (2nd Edition).
- ▶ Available in OLAT.
- ▶ The author of the book has all the resources of the book (notebooks, figures, presentations, errata) available here:  
[https://github.com/jermwatt/machine\\_learning\\_refined/tree/gh-pages](https://github.com/jermwatt/machine_learning_refined/tree/gh-pages)



- ▶ The book "*Machine Learning - A First Course for Engineers and Scientists*".
- ▶ Available in OLAT.
- ▶ Resources available here:  
<http://smlbook.org/>



# Other Resources

The screenshot shows the OLAT interface for the course 'Machine Learning and Data Mining (MS)'. The left sidebar contains a navigation menu with the following items: 'Machine Learning and Data', 'Course Team', 'Course Logistics', 'Books and Other Resources' (selected), 'Main Textbooks', 'Other ML Books', 'Lecture Materials', 'Assignments', 'AI Policy', and 'Forum'. The main content area is titled 'Books and Other Resources' and features a banner image with the text 'BOOKS AND OTHER RESOURCES'. Below the banner, there is a section titled 'Table of contents' with two sub-sections: 'Main Textbooks' and 'Other ML Books'. The 'Main Textbooks' section includes a description: 'Here you can find the main textbook of the course, as well as, other open access machine learning related resources.' The 'Other ML Books' section includes a description: 'Here there is a list of open access Machine Learning books, available to download.' and a list of two items: 'These books can be optionally used as extra sources for clarifying concepts or investigate further topics of Machine Learning' and 'The book "Machine Learning Refined" remains the main textbook of this module'.

► Additional resources are available in OLAT course page.

## Any Questions?

*Have a great beginning to the Machine Learning course!*