Machine Learning and Data Analytics in Finance and Accounting (MDA)

Munich, Germany
July 28 – August 14, 2025
www.ebi-misu.de

Online-Sessions July 28 – August 1
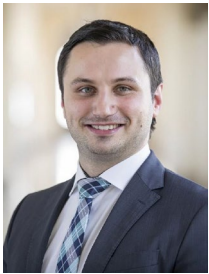In-class Sessions August 4 – 14

Tentative Schedule

Munich 2025

Sessions: July 28 – August 14

Patronage

Prof. Dr. Thorsten Sellhorn
Institute for Accounting, Auditing and Analysis
Munich School of Management

Lecturer

Dr. Andreas Woltschläger
Professional expert and former Research Assistant
Institute for Accounting, Auditing and Analysis
at the Munich School of Management at LMU Munich

Dr. Gereon Hillert
Professional expert and former Research Assistant
Institute for Accounting, Auditing and Analysis
at the Munich School of Management at LMU Munich

Live seminar sessions
As live online tool for the courses, we will use "Zoom":
https://lmu-munich.zoom.us/

It is not mandatory to create a LMU Zoom account. You will receive an
invitation by email before the first session for participation in class and the
Zoom Client is usable in your browser.

Classroom in Munich
tba

Program

All times are stated in the CEST standard time format

Date	9:00 a.m. - 1:30 p.m.	2:00 p.m. – 6:30 p.m.
Mon, 28.07.2025 ONLINE	**Introduction** • Introduction to machine learning and its application in finance and accounting **Readings** • MG* - Chapter 1 (p. 1 – 4)	
Tue, 29.07.2025 ONLINE	**Introduction to Python (1/3)** • Getting ready • Python Basics for Data Science • Case – Part 1 **Readings** • MG* - Chapter 1 (p. 5 – 11)	
Wed, 30.07.2025 ONLINE		
Thu, 31.07.2025 ONLINE	**Introduction to Python (2/3)** • Importing, cleaning and merging data • Case – Part 2	**Team event** • Bavarian and international culture
Fri, 01.08.2025 ONLINE		
Sat, 02.08.2025 ONLINE	**Introduction to Python (3/3)** • Natural language processing • Textual Analysis • Case – Part 3 **Readings** • MG* - Chapter 7	
Sun, 03.08.2025	**Arrival in Munich**	

Date	9:00 a.m. - 1:30 p.m.	2:00 p.m. – 6:30 p.m.
Mon, 04.08.2025 IN-CLASS	**Machine Learning** • Unsupervised machine learning • Case - Part 4 **Readings** • MG* - Chapter 2 (p. 25– 27)	
Tue, 05.08.2025 IN-CLASS		
Wed, 06.08.2025 IN-CLASS	**Machine Learning** • Supervised machine learning I – Basics **Readings** • MG* - Chapter 2 (p. 25– 27)	**Machine Learning** • Supervised machine learning II (GH) - Application • Case - Part 5 • Wrap-up & Q&A **Readings** • MG* - Chapter 3 (p. 131-134)
Thu, 07.08.2025 IN-CLASS		
Fri, 08.08.2025 IN-CLASS	**Machine Learning** • Supervised machine learning II - Model evaluation • Case - Part 6	**Data Analytics I** & **II** • Data Visualization • Data description • Statistical analysis • Case - Part 7 **Selected topics in data analytics** **Summary of overall content** **Team event** • Bavarian culture
Sat, 09.08.2025 IN-CLASS	**No class** • Time to prepare student presentations	**No class** • Time to prepare student presentations

Date	9:00 a.m. - 1:30 p.m.	2:00 p.m. – 6:30 p.m.
Mon, 11.08.2025 IN-CLASS		**Presentations & Wrap-up 2** • Presentations on supervised and unsupervised machine learning (e.g., prediction of house price)
Tue, 12.08.2025 IN-CLASS	**No class** • Time to prepare exam	**No class** • Time to prepare exam
Wed, 13.08.2025 IN-CLASS	**No class** • Time to prepare exam	**No class** • Time to prepare exam
Thu, 14.08.2025 IN-CLASS	**Exam: 12:00 – 13:00** **Farewell Event**	
Fri, 15.08.2025	**Departure from Munich**	

Note that the agenda is preliminary and may be subject to change.

References:

* Andreas C. Müller, Sarah Guido: Introduction to Machine Learning with Python: A Guide for Data Scientists, 1st Edition - MG (Main Textbook)

Bird, Steven; Klein, Ewan; Loper, Edward: Natural Language Processing with Python, First edition, 2009

Géron, Aurélien: Hands-On Machine Learning with Scikit-Learn and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems 1st Edition