LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

MUNICH INTERNATIONAL SUMMER UNIVERSITY

MUNICH MISU LMU INTERNATIONAL SUMMER UNIVERSITY

Artificial Intelligence and Machine Learning

Foundations and Applications in Corporate Finance

Online Winter School (AIW)
www.aiw-misu.de

January 4 – January 22, 2027

Schedule



Tools and Packages Covered

python™ ChatGPT scikit learn Machine Learning Using Python Pandas NumPy

Artificial Intelligence and Machine Learning

Faculty

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 “MS Teams"

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

Online Classroom

Program

All times are stated in the CEST standard time format

Date	7:00 a.m. - 10:00 a.m.	Readings
Mo, 04.01.2027 ONLINE	**Introduction** • Introduction to machine learning and its application in finance and accounting	MG* - Chapter 1 (p. 1 – 4)
Tue, 05.01.2027 ONLINE	**Introduction to Python (1/3)** • Getting ready • Python Basics for Data Science • Case – Part 1	MG* - Chapter 1 (p. 5 – 11)
Wed, 06.01.2027 ONLINE	**No class** • Project work • Time to prepare	
Thu, 07.01.2027 ONLINE	**Introduction to Python (2/3)** • Importing, cleaning and merging data • Case – Part 2	
Fri, 08.01.2027 ONLINE	**Introduction to Python (3/3)** • Natural language processing • Textual Analysis • Case – Part 3	MG* - Chapter 7
Sat, 09.01.2027 ONLINE	**Machine Learning** • Unsupervised machine learning • Case - Part 4 • Wrap-up & Q&A	**Readings** • MG* - Chapter 2 (p. 25– 27) **Team event I** • Bavarian and international culture

Program

All times are stated in the CEST standard time format

Date	7:00 a.m. - 10:00 a.m.	Readings
Mon, 11.01.2027 ONLINE	**Machine Learning** • Supervised machine learning I – Basics	**Readings** • MG* - Chapter 2 (p. 25– 27)
Tue, 12.01.2027 ONLINE	**Machine Learning** • Supervised machine learning II - Application • Case - Part 5 • Wrap-up & Q&A	**Readings** • MG* - Chapter 3 (p. 131-134)
Wed, 13.01.2027 ONLINE	**Machine Learning** • Supervised machine learning III - Model evaluation • Case - Part 6	
Thu, 14.01.2027 ONLINE	**No class** • Project work • Time to prepare	
Fri, 15.01.2027 ONLINE	**Machine Learning** • Case - Part 6 • Wrap-up & Q&A	**Current Trend and topics in data analytics and AI** • Practical applications of business intelligence • Current research papers
Sat, 16.01.2027 ONLINE	**Data Analytics I & II** • Data Visualization • Data description • Statistical analysis • Case - Part 7	
Sun, 17.01.2027 ONLINE	**No class** • Project work • Time to prepare	

Date	7:00 a.m. - 10:00 a.m.	Readings
Mon, 18.01.2027 IN-CLASS	**Presentations & Wrap-up** • Presentations on supervised and unsupervised machine learning (e.g., prediction of house price)	
Tue, 19.01.2027 IN-CLASS	**No class** • Project work • Time to prepare	
Wed, 20.01.2027 IN-CLASS	**No class** • Project work • Time to prepare	
Thu, 21.01.2027 ONLINE	**Exam: 8:00 – 9:00** **Farewell**	

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

Hillert Gereon; Woltschläger, Andreas (2019): Information content of deal communication in Europe – A machine learning approach

Hillert Gereon; Woltschläger, Andreas (2019): Operating leverage and learning from peer investment