

# Machine Learning and Data Analytics in Finance and Accounting

Munich, Germany  
July 25 – August 12, 2022  
[www.mda-misu.de](http://www.mda-misu.de)



# Munich 2022

Sessions: July 25 – 12

Session will take place at: will be announced

## Patronage



### **Prof. Dr. Thorsten Sellhorn**

Institute for Accounting, Auditing and Analysis  
Munich School of Management

## Lecturer



### **Dr. Gereon Hillert**

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



### **Dr. Andreas Woltschläger**

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

<b>Date</b>	<b>Time</b>	<b>Block</b>	<b>Content</b>	<b>Readings</b>
Mon, 25.07.22	10.00 – 14.00	<b>Intro</b>	Introduction to machine learning and its application in finance and accounting  <b>Meeting point:</b> will be announced  Case Introduction	MG* - Chapter 1 (p. 1 – 4)
Tue, 26.07.22			No class	
Wed, 27.07.22			No class	
Thu, 28.07.22	9.00 – 13.30	<b>Introduction to Python</b>	Getting ready  Python Basics for Data Science  Case – Part 1	MG* - Chapter 1 (p. 5 – 11)
Thu, 28.07.22	Starting 18:00	<b>Team Event</b>	Bavarian culture I (Starting 18:00 p.m.)	
Fri, 29.07.22	9.00 – 13.30	<b>Introduction to Python</b>	Importing, cleaning and merging data  Case – Part 2	
Sat, 30.07.22	9.00 – 13.30	<b>Introduction to Python</b>	Natural language processing - Textual Analysis  Case – Part 3	MG* - Chapter 7 (p. 323 – 325)
Sun, 31.07.22			No class	

<b>Date</b>	<b>Time</b>	<b>Block</b>	<b>Content</b>	<b>Readings</b>
Mon, 01.08.22	14.00 – 18.30	<b>Machine Learning</b>	Unsupervised machine learning  Case - Part 4	MG* - Chapter 2 (p. 25– 27)
Tue, 02.08.22	9.00 – 13.30	<b>Machine Learning</b>	Supervised machine learning I - Basics	MG* - Chapter 2 (p. 25– 27)
Wed, 03.08.22	9.00 – 13.30	<b>Machine Learning</b>	Supervised machine learning II (GH) - Application  Case - Part 5  Wrap-up & Q&A	MG* - Chapter 3 (p. 131-134)
Thu, 04.08.22	9.00 – 13.30	<b>Machine Learning</b>	Supervised machine learning II - Model evaluation  Case - Part 6	
Thu, 04.08.22	Starting 18:00	<b>Recap and team event</b>	Recap and bavarian culture II (Starting 18:00 p.m.)	
Fri, 05.08.22	9.00 – 13.30	<b>Data Analytics &amp; Wrap-up 2 &amp; Q&amp;A</b>	Data Visualization Data description Statistical analysis Case - Part 7  Summary of overall content	
Sat, 06.08.22			No class	
Sun, 07.09.22			No class	

<b>Date</b>	<b>Time</b>	<b>Block</b>	<b>Content</b>	<b>Readings</b>
Mon, 08.08.22			<b>No class. Time to prepare for exam and student's presentation.</b>	
Tue, 09.08.22	9.00 – 13.30	<b>Presentations</b>	Student's Presentations	
Wed, 10.08.22			<b>No class. Time to prepare for exam.</b>	
Thu, 11.08.22	09:00 – 14:00	<b>Exam</b>		
Fri, 12.08.22			No class	
Sat, 13.08.22			No class	
Sun, 14.08.22			No class	

**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