Prof. Dr. Nicolas Pröllochs
Chair for Data Science & Digitization (BWL XI)
University of Giessen

JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN

Course: Applied AI (M. Sc.)

Winter Term 25/26

Course details

- Module codes: 02-BWL/VWL:MSc-B11-Extra2
- Lecturer: Prof. Dr. Nicolas Pröllochs (BWL XI)
- Course format: Lecture (6 CP)
- Term: Winter semester 25/26
- Language: English
- Grading: Oral examination (presentation)

Course description

Artificial Intelligence (AI) is transforming businesses by unlocking new opportunities for efficiency and data-driven decision-making. The master's course on "Applied AI" provides students with an overview of the field of AI with a focus on real-world applications. Students will learn the end-to-end process of preparing data, implementing machine learning models, and evaluating their performance. The course will provide hands-on coding examples, equipping students with the necessary skills to implement these techniques independently. At the end of the course, participants will be familiar with the most important concepts, principles, algorithms, and challenges in applied AI.

The **main objectives of this course** are to:

1) **Understand the basic concepts of AI and machine learning** and their **relevance in business contexts**
2) **Obtain an overview** of different **methods**, **algorithms,** and **software tools** for applied AI
3) **Learn how to train and evaluate AI methods** on real-world datasets
4) **Understand limits and challenges** associated with contemporary AI methods, including **ethical considerations and biases**

Term project & grading

Grading will be based on an oral presentation, which will report on the results of a term project conducted throughout the semester. The assignments will consist of a specific problem from applied AI (e.g., applying a machine learning method on a given dataset). Students will be provided with an assignment at the beginning of the semester and may work on their projects individually or in small groups. **Assignments will be tailored to students' interests and expertise. Basic experience in computer programming (e.g., in R, Python) is desirable but not mandatory.**

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Application

The number of participants is limited to a maximum number of 24 students. Please register for the course by sending an e-mail to datascience@wirtschaft.uni-giessen.de. Please attach your current transcript of records (FlexNow printout) and a short (max 50 – 100 words) motivational statement (optional). If more than 24 students apply, participants will be selected based on their previous grades and/or their motivational statement. **The application deadline is October 2, 2025.**

Schedule & Organization

The schedule and organizational details will be announced in due course.