

Master in Accounting and Controlling - Tools and Applications for Data Science, Data Analytics, and Process Automation



Altair AI Studio

Create, compare, and deploy machine learning models fast.

According to Gartner, Altair AI Studio is a leading platform for data analytics, machine learning, and artificial intelligence. Altair AI Studio enables students to experience the entire process from data preparation to machine learning modeling. With Altair AI Studio, even students without in-depth programming knowledge can use the visual development environment to create complex models for issues in controlling & accounting, such as forecasting and anomaly detection.



Excel

Flexible tables, fast analyses, and versatile data models for day-to-day tasks.

Financial Modeling with Excel: Students use Excel to independently create a complete, consistent, and transparently structured financial model of a company. In doing so, they acquire methodological competencies in Excel-based financial modeling, particularly in the structured implementation of cost-of-capital calculations, company valuations, and sensitivity and scenario analyses. Working on a real-world case study, they also expand their technical expertise in corporate finance. At the same time, they develop cross-disciplinary skills such as analytical and systematic thinking, critical assessment of model assumptions, practical application, and mastery of model-based decisions and arguments.



Power BI

Build interactive dashboards and unlock data-driven decision-making.

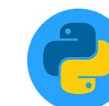
According to Gartner, Power BI is a leading platform for business intelligence and advanced analytics. With it, students will learn to automatically consolidate data from various sources (such as ERP systems, Excel, and cloud databases) and keep datasets up to date at all times. They also develop interactive dashboards that not only provide visualizations but also enable in-depth analyses, such as trend and root-cause analyses or AI-powered evaluations. Additionally, they learn how to use Power BI as an automation tool to standardize regular reporting processes and to make data provision within the company efficient and transparent.



UiPath

Automate routine processes and streamline digital workflows.

According to Gartner, UiPath is a leading platform for Robotic Process Automation (RPA). Students develop their first robots on this platform, which can be used to automate recurring tasks in Controlling & Accounting with software support. They also learn how classic RPA functions can be enhanced by AI agents that can make decisions independently and execute more complex workflows. Through this process, they learn to design end-to-end processes more efficiently and intelligently in an agentic automation environment.



Python

Analyze data, automate processes, and implement machine learning flexibly.

Python and R are the two most important software environments for statistics, business analytics, and machine learning. In the master's program, R is used for statistics and econometrics. Students learn to import data and convert it into various data objects (specifically data frames, matrices, and time series objects). They learn how to filter, exclude, and transform rows and columns for analysis, skills that are central to any data science project. Students become familiar with methods of descriptive and inferential statistics, enabling them to use data to investigate operational and scientific questions. In econometrics, they will learn to use statistical methods to test economic models and hypotheses for validity and to generate forecasts. In the course "Exploratory Data Analysis with Python," students learn how to prepare, clean, merge, and perform descriptive analysis on data using Python. This course uses the libraries NumPy, Matplotlib, and, in particular, Pandas.



R

Academic-level statistical analyses and visualizations.