



Bern University
of Applied Sciences



CAS Blockchain, Artificial Intelligence and Data Science for Finance

Changing the world with new technologies



Combining IT and Data Science profitably

Description and conception

You work at the interface between IT, business and management and want to learn about and apply new methods and techniques of digitalisation? Do you want to be prepared for the data-driven change in the digital environment? This CAS takes you on a journey from the technical basics to the active implementation to the strategic level of these new methods. In doing so, you will recognise the opportunities of using data and Artificial Intelligence and utilise their potential to create competitive advantages. The future belongs to data and new digital methods and models.

Training objectives

The CAS supports you in the digital transformation towards a data-driven organisation. You will become fluent in the language of data scientists and will be able to represent and advance your interests in interdisciplinary projects. In the CAS, the following competences are taught at the strategic and operational level:

- You know technical concepts, models and tools in the field of Data Science and can apply them in a subject-specific way in the financial industry.
- You will be familiar with the key innovations and trends in Artificial Intelligence and Data Science and will be able to identify application scenarios and design options for your organisation.
- You combine IT and Data Science and use Data Storytelling for visual communication by giving colour and life to «blank data».
- You apply sound theoretical knowledge of machine learning as a basis for understanding digital projects within your organisation.
- You implement the theoretical models concretely with the help of a programming language (R/ Python) using some application examples.

Characteristics

- Title/Degree: Certificate of Advanced Studies (CAS)
- Duration: 17 study days
- Schedule: Thursday, Friday, approx. every 3 – 4 weeks
- Number of ECTS-Credits: 12
- Evidence of competence: transfer-oriented report, application-oriented project, presentation
- Costs: CHF 8'500
- Location: Schwarztorstrasse 48, 3007 Bern
- Course dates: Spring semester

Subjects

You improve your decision-making and the operational and strategic value creation of your products, services, business models and strategies on the basis of data and Artificial Intelligence. In doing so, you will recognise fields of action to continuously advance your organisation.

- Foundations of Data Science:
 - Data Analysis and Data Visualization
- Machine Learning and Artificial Intelligence in Finance
- Blockchain, Distributed Ledger and Smart Contracts
- Big Data and Cloud Computing
- Applications and final presentations
- Day 17: Applications and final presentations

The contents of the individual modules are listed on the website.

Contact

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