

Machine Learning for Advanced Portfolio and Risk Management

Rethink Risk. Reinvest Returns.

Certificate of Advanced Studies (CAS)



Programme at a glance

Supercharge your portfolio management with machine learning

Step out of your comfort zone – turn innovation into action with hands-on tools to transform how you manage portfolios and risk.

CONTEXT

The CAS in Machine Learning for Advanced Portfolio & Risk Management gives you a practical toolkit to design, test, and implement ML-driven investment processes. You'll learn how to turn noisy financial data into robust signals, evaluate strategies with realistic costs and risks, and translate research into production-ready workflows. By the end, you can assess ML methods critically, build portfolios with clearer risk controls, and communicate results to stakeholders.

TARGET AUDIENCE

Portfolio and risk managers, analysts, quantitative researchers, data scientists, and (IT) project leads in financial institutions and fintechs who want to apply ML rigorously in investment and risk processes.

KEY FEATURES

Offered part-time as a 12-ECTS Certificate of Advanced Studies, the programme runs over roughly five months (15 course days) in Zurich. The tuition fee is CHF 8500.–. You can complete it as a standalone CAS or count it toward the MAS "Innovation & Transformation for Financial Services."

COURSE OVERVIEW

MODULE 1	6 ECTS credits	MODULE 2	6 ECTS credits
Foundations of ML in Finance		Advanced ML Applications	
– Data ingestion and exploratory data analysis – Signal generation and feature engineering – Unsupervised and supervised machine learning toolkit – Portfolio construction fundamentals – Backtesting and evaluation		– Risk management and covariance modelling – Advanced portfolio management and reinforcement learning for allocation – NLP for stock selection and agentic AI workflows – Trade execution and market microstructure	

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ADMINISTRATION AND ADMISSION

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