Mathias Ruoss

Data Scientist, MSc in Quantitative Finance ETH Zurich

Passionate about programming, data science, and statistics, with 5+ years of Python experience. Eager to leverage my skills in machine learning and quantitative analysis to contribute to a collaborative team and drive data-informed decisions.

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WORK EXPERIENCE

Data Science/ Quant Analyst Intern - Flex Pooling
Axpo

01/2025 - Present — *Baden, Switzerland*

- Developing and deploying machine learning models using Python to forecast energy demand and supply in ancillary services
- Optimizing BESS dispatch strategies for real-time and day-ahead trading
- Implementing and optimizing data engineering workflows within the Azure ecosystem, using Synapse and Databricks for ETL processes

Data Science Intern
Swiss National Bank (SNB)

09/2023 - 09/2024 — *Zurich, Switzerland*

- Constructed end-to-end ML pipelines using Python
- Optimized models to enhance forecast accuracy using mlflow
- Implemented CI/CD pipelines in gitlab (automated testing, static code analysis, package deployment on internal pypi mirror)
- Reviewed, debugged (VSCode IDE) and tested code using pytest

Contact : Dr. Helge Liebert - helge.liebert@snb.ch

Equity Derivatives Sales Intern
UBS AG

03/2019 - 08/2019 — *Opfikon, Zurich, Switzerland*

- Priced and designed structured products
- Streamlined operations through automation using Microsoft VBA
- Enhanced trading support by dilligently monitoring market making quotes

Contact : Jérôme Allet - jerome.allet@ubs.com

EDUCATION

Master of Science, Quantitative Finance
ETH Zurich

09/2019 - 02/2023 — *Zurich, Switzerland*

- Thesis: Option Return Classification with Machine Learning (5.75/6.0)
- Relevant Courses: Introduction to ML, Advanced ML, Probabilistic AI, Deep Learning, Finance and ML, MFF

Bachelor of Arts, Banking and Finance
University of Zurich

09/2015 - 12/2018 — *Zurich, Switzerland*

- Thesis: Betting against Beta - Evidence from the Swiss Stock and Bond Market (6.0/6.0)
- Semester Award Fall 2018, awarded CHF 600.- for outstanding Bachelor Thesis

SKILLS

Programming: Python (5+ y), Git, SQL, C++, R

ML toolkit: numpy, pandas, scikit-learn, matplotlib, seaborn, xgboost, pytorch, mlflow

SW development in Python: IDE (VS Code), debugging, testing/linting/type checks

Statistics and math

Project management

ML PROJECTS

Time Series Forecasting of Swiss CPI Diesel/ Petrol Index (@Swiss National Bank) (2024)

Time Series Forecasting of Swiss Rental Prices (@Swiss National Bank) (2024)

Option Return Classification with ML (2023)

Polynomial Feature Learning (2022)

Deep RL applied to Stock Trading (2021)

Road Segmentation with CNNs (2021)

LANGUAGES

English (fluent)

German (native)

French

HOBBIES

Basketball, Football, Gym, Cooking, Hiking, Exploring Cities