Mathias Ruoss

Data Scientist with a Master in Quantitative Finance from ETH Zurich

Passionate about programming, data science and statistics. I like to invest in well-written code and with 4+ years of experience in software engineering in Python, I look forward to contributing to your team!

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WORK EXPERIENCE

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
- Conducted competitor analysis and executed innovative strategies

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

Reporting Specialist
UBS AG

12/2013 - 07/2015 *Zurich, Switzerland*

- Gap year for personal growth and exploration before university studies
- Served as Deputy Product Specialist for the Spanish tax report
- Developed automated tax reports for international clients

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, Mathematical Foundations for Finance

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 (4+ y), 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 (2024)

Time Series Forecasting of Swiss Rental Prices (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