Markus Öffel, M.Sc.

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PROFILE

Quantitative Finance and Data Science professional specializing in time series analysis, volatility forecasting, and risk modeling. Hands-on experience building quantitative models in Python and R for forecasting, portfolio analysis, and asset allocation. Proven track record in cross-functional product ownership, automated reporting, and data-driven decision support. Seeking to develop innovative quantitative models and digital research products for retail and private banking clients.

CORE COMPETENCIES

Quantitative Methods: Time Series Analysis (ARIMA, GARCH/EGARCH/FIGARCH), Monte Carlo Simulation, Value-at-Risk (VaR), Expected Shortfall (ES), Forecasting Models

Portfolio Analytics: Portfolio Analysis, Asset Allocation, Equity Scoring, Minimum-Variance Optimization, Sharpe Ratio Optimization

Risk Analysis: Market Risk, Interest Rate Risk, Credit Risk Assessment, Model Backtesting, Kupiec Test, Christoffersen Test

Programming: Python (pandas, NumPy, statsmodels, arch, scikit-learn), R, SQL, Excel/VBA

AI / Machine Learning: LLM Engineering, RAG (Retrieval-Augmented Generation), QLoRA Fine-Tuning, AI Agents

Reporting & Visualization: Jupyter Notebooks, R Markdown, Power BI, Tableau, Automated Reports, Dashboards

Collaboration & Agile: Git, Atlassian (Jira, Confluence), Scrum, Agile, Cross-functional Stakeholder Management

PROFESSIONAL EXPERIENCE

Product Owner / Data & Financing

Swisslife Select Austria — Vienna/Hybrid | Jul 2025 – Present

- Partner with Head of Sales on strategic data initiatives, developing KPIs and forecasting models for business planning
- Serve as Product Owner for financing squad, aligning advisor requirements with business needs and IT delivery in Agile/Scrum environment
- Analyze sales and financing data using Python and SQL; deliver automated management reports, forecasts, and decision templates
- Core member of internal AI taskforce: design and prioritize automation and AI-driven use cases for operational efficiency
- Contributor to Investment Squad: support asset allocation discussions and portfolio analysis with quantitative input

Financing Specialist

Swisslife Select Austria — Graz/Hybrid | May 2024 – Jun 2025

- Advised asset managers and clients on mortgage financing strategies, applying market data analysis and interest rate risk assessment
- Analyzed credit risk and market risk in private real-estate financing portfolios
- Developed decision templates based on interest rate forecasts and regulatory requirements

Project Manager, Network & Events

Verein Netzwerk Logistik — Kapfenberg | Feb 2023 – Oct 2023

- Built and maintained cross-industry corporate network with 50+ member companies
- Planned, budgeted, and executed industry events and workshops; delivered presentations and stakeholder communications

Quality Manager

Hanfama Pflanzen Produktions GmbH — Graz | Sep 2020 – Jan 2023

- Optimized quality management system and process documentation
- Served as interface between purchasing, sales, production, and management

RESEARCH & PROJECTS

Master's Thesis: ARIMA-GARCH Models for Cryptocurrency Risk Assessment

University of Graz | 2025

- Built end-to-end Python pipeline for time series forecasting and volatility modeling across multiple asset classes (BTC, ETH, DOGE, SOL)

- Implemented ARIMA + GARCH/EGARCH/FIGARCH variants with automated model selection using AIC/BIC criteria
- Developed rolling backtest framework with multi-horizon evaluation for forecasting model validation
- Conducted risk evaluation via Value-at-Risk (VaR) and Expected Shortfall (ES) with Kupiec and Christoffersen backtesting
- Created automated reporting system generating CSV exports, visualization plots, and reproducible Jupyter Notebooks

EDUCATION

M.Sc. Business Administration — University of Graz

Oct 2023 – Oct 2025 | Focus: Corporate Finance, Investments, Business Analytics & Data Science

- Specialization in quantitative investment methods: minimum-variance optimization, Sharpe ratio optimization, Monte Carlo techniques
- Coursework in portfolio analysis, asset allocation, and financial econometrics

B.Sc. Innovation Management (part-time) — Campus02 UAS Graz

Sep 2020 – Jul 2023

Higher Technical Institute (Industrial Engineering, Logistics) — Leoben

2004 – 2009

CERTIFICATIONS & UPCOMING EXAMS

CFA Level I Exam — scheduled for **19 August 2026**
AI Engineer Core Track: LLM Engineering, RAG, QLoRA, Agents (Udemy) — Jan 2026
Google Advanced Data Analytics Professional Certificate (Coursera) — Feb 2025
DataCamp: Data Analyst in Python — Feb 2025
DataCamp: Python Data Fundamentals — Feb 2025

LANGUAGES

German (C2 Native) | English (C1 Fluent) | French (A2 Basic)