

Thoran Harry Ignatz Tschöpe

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EDUCATION **Hermann Staudinger Gymnasium, Erlenbach/Main, Germany** 2020
Abitur

Ludwig Maximilians University, Munich, Germany 02-2024
B.Sc. in Mathematics
Thesis: "Quasi-Newton-Verfahren: Theorie und Implementierung"
(Grade: 1.0)

Technical University of Munich, Munich, Germany expected 10-2026
M.Sc. in Mathematical Finance and Actuarial Science

MATH

Theoretical Mathematics
Financial Mathematics, Analysis, Numerical Analysis, Topology, Ordinary Differential Equations, Measure Theory, Integral Theory, Linear Algebra, Probability Theory & Stochastic Processes, Optimization

Applied Mathematics
Machine Learning, Linear Models, Applied Financial Mathematics, Computer Based Mathematics

PROJECTS

Cross-Exchange Relative Value Strategy
Development of an algorithmic trading strategy monitoring price relationships between DEX and CEX markets for comparing DEX A/B pairs with CEX A/USDT and B/USDT pairs using own Market Streaming Library.

Market Streaming Library (C++/Python)
Development of a library processing market data using Boost Asio and multithreading including efficient data extraction capabilities with Python bindings. The library is optimized for low-latency market data processing across multiple sources.

Data Analysis Infrastructure
Operating a Dell R730 server for real-time market data streaming, storage, analysis and trading using the Market Streaming Library. The server mainly runs Proxmox, Grafana stack, Minio, Redis and Docker.

Financial Mathematics (C++/Python)
Financial Mathematics Concepts with theory & visualizations:
Black-Scholes PDE with finite difference method, Monte Carlo Estimation, Variance Reduction Techniques, Monte Carlo for American Options, Binomial Tree Models in C++

Neural Network Framework (C++)
Development of a modular neural network architecture with focus on simplicity of concepts. Evaluation on examples such as MNIST dataset with a fully connected network.

TECH SKILLS **Languages:** C++, Python, R, MATLAB
TOOLS: CMake, Git, Latex, Visual Studio Code, CLion
SYSTEMS: Windows, Linux base

LANGUAGES German (native), English (C2, TOEFL 114/120), French (B1), Spanish (A2)

October 26, 2024