Genc Kqiku
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Education

SWISS FEDERAL INSTITUTE OF TECHNOLOGY, ETH | Department of Mathematics, Zurich, Switzerland
Master of Science, Mathematics – Concentration in Machine Learning, GPA: 3.7 **February 2023**
Master's thesis: *"On the Existence of MLE in High-dimensional Misspecified Logistic Regression"*, Prof. Bölcskei
Relevant Coursework: Neural Network Theory, Learning Classification and Compression, Machine Learning in Finance, Numerical analysis of SDEs, Time Series Analysis, Advanced Probability, Computational Statistics

SWISS FEDERAL INSTITUTE OF TECHNOLOGY, EPFL | Mathematics Section, Lausanne, Switzerland
Bachelor of Science, Mathematics **August 2020**
Bachelor's thesis: *"Robust tests and location estimators over uncertainty classes"*, Prof. Sara van de Geer
Relevant Coursework: Mathematical Statistics, Statistical Modeling, Bayesian Statistics, Causality, Brownian Motion and Stochastic Processes, Advanced Analysis, Linear Algebra, Discrete Optimization, Rings and Fields, Programming

Sample Projects & Work Experience

Orikon Systems, Fribourg, Switzerland **March 2021 – April 2024**
Quantitative Developer, Algorithmic Trader. Tech Stack: Python, PyTorch, AWS (EC2, S3), Linux

- Co-founded a company which was the structure for the research and development of automated trading strategies and the management of capital from external entities, exploiting the latter strategies.
- Built a backtesting infrastructure allowing to test a large basket of StatArb strategies based on ML. Implemented multiprocessing to accelerate the execution time. Obtained backtested results were then successfully backed and confirmed by live-tested results.
- Developed a fully automated trading strategy based on a recurrent deep learning model recognizing patterns in high-frequency and high-dimensional Limit Order Book data to predict mid-term price movements of various liquid cryptocurrency tokens. The RNNs architecture was designed based on R&D made on data that was stored and collated months beforehand. The latter model resulted in a long/short market neutral StatArb strategy, trading a portfolio of 30+ tokens with dynamic allocation, yielding a >2.5 Sharpe ratio.
- Coded the implementation of the automated strategy in a program which was streaming data from CEX, evaluating the model and executing the trade orders based on the model's output. The program traded funds of external entities and was running 24/7 on an AWS EC2 instance, encountering no major fault. The potential defaults coming from the CEX were handled programmatically and notified to the manager's phone.
- Implemented a monitoring interface allowing the manager to handily retrieve and visualize relevant data from the model, the open positions and their current return, as well as general market indicators and manually adjust model parameters and open/close positions in emergency situations.

Neural Jump Ordinary Differential Equations for Classification, Tech Stack: Python, PyTorch **June 2021**

- Studied the NJ-ODE model, combining neural ODEs and RNNs and designed and implemented an adaptation of this model for classification tasks. Applied the model to the PhysioNet Computing in Cardiology Challenge 2019, consisting of making predictions of sepsis from clinical data.

Swiss Federal Institute of Technology, Zurich, Switzerland **February 2021 – December 2021**
Teaching Assistant

- Lectured exercise classes twice a week and corrected exercise series for 20-30 students
- Responsible of exercise classes for the lecture "Probability Theory" for Fields Medal laureate Prof. Wendelin Werner. Level: 3rd year Bachelor – Master
- Responsible of exercise classes for the lecture "Wahrscheinlichkeit und Statistik" for Prof. Martin Schweizer

Skills & Interests

Computer Skills: Python, C++, SQL, R, MATLAB, AWS, Linux
Languages: English (fluent), French (native), German (intermediate)
Interests: Sports, Chess, Artificial Intelligence