

Anton Shchablykin

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EDUCATION

Cornell University, College of Engineering, Ithaca, NY
Master of Engineering in Financial Engineering, GPA: N/A

Expected Dec. 2023

Moscow State Institute of International Relations, Moscow, Russia
Bachelor of Arts in International Economics with Honors, GPA: 3.96 out of 4.0

July 2022

Selected Coursework: Econometrics and Time-Series Analysis, Probability Theory, Stochastic Calculus and Control, Machine Learning, Reinforcement Learning, Simulation Modeling and Analysis, Financial Mathematics, Macroeconomics, Fixed Income and Interest Rate Derivatives, Investment and Portfolio Management

SKILLS

Technical: Python, R Studio, SQL, SPSS, MATLAB, Simio, Microsoft Office, Bash

Certificates: Data Analysis in SAP DI (SAP Cloud Academy); CFA Prep Program (EY Business Academy)

EXPERIENCE

Business Analyst Intern (Remote), *Codex Technologies*, Russia

Feb. to March 2022

- Took part in evaluating the effectiveness of capital investment into building a GPS Software and Routing Optimization System
- Assisted in development of a software, used to optimize routes of trucks for a waste management company using **Python**
- As a part of a team of 7, made an overall performance evaluation of the new GPS-tracker

PROJECTS

Machine Learning, *Cornell University*, Ithaca, NY

Aug. to Dec. 2022

- Implemented k-NN algorithm from scratch for image classification and linear perceptron for email spam filtering in **Python**
- Built and tested the performance of Kernelized SVMs (using Linear, Polynomial and RBF Kernels) on various datasets
- Developed CNNs and multi-layer perceptron models using **PyTorch** for hand-written digit classification on MNIST dataset
- Trained an AdaBoost algorithm to predict if a quadruped had an injured leg or not from a variety of sensor readings as part of a Kaggle competition, achieving 100% accuracy score

OHCA Simulation Modeling (team of 4), *Cornell University*, Ithaca, NY

Nov. to Dec. 2022

- Performed data analysis and probability distribution fitting on a dataset containing information about volunteer arriving times and response delays using **NumPy** and **SciPy**
- Built a simulation model in **Python** to create an optimal volunteer dispatch policy that maximizes the survival rate of patients experiencing out-of-hospital cardiac arrest
- Achieved an 11.34% survival rate (with 14% being theoretical maximum) by comparing frameworks for 4 different volunteer dispatch policies and estimating the most optimal one that maximizes survivability and minimizes the number of volunteers alerted

Simulation of Black-Scholes and Binomial Models for Option Pricing, *Cornell University*, Ithaca, NY

Oct. 2022

- Implemented a no-arbitrage N-period Binomial model in **Python** to estimate the value of a call option, as well as stock prices and portfolio positions for SFRP at each possible step and made observations about its convergence to the Black-Scholes (B-S) Model
- Visualized relationships between Greeks and various parameters of the B-S Model using **SciPy**, **NumPy** and **Seaborn**
- Developed a Delta-Hedging algorithm to calculate the payoff of an option by simulating a self-financing portfolio and studied the influence of the overall number of portfolio rebalances on model's estimation error

Internship Database (team of 5), *MGIMO*, Moscow, Russia

Oct. to Dec. 2019

- Compiled information on available summer and winter internships in Europe for university students, using **Pandas** and **NumPy** for data cleaning, Excel's pivot tables for 3NF conversion and **SQL** for linking existing tables
- Created a Relational Database in Access, as well as a user-friendly interface that allowed students to choose an internship based on personal preferences

RESEARCH

Analysis of Volatility Forecasting Models, *MGIMO*, Moscow, Russia

March to June 2022

- Studied the mathematical basis of two main classes of models used for volatility forecasting; collected and standardized data of two assets with different levels of variation to make a volatility forecast
- Built a deterministic and a stochastic model in **Python**, compared two forecasts within a highly volatile market state, and compiled a methodology for choosing a model depending on the level of market and asset variance
- Gave a concise 7-minute presentation based on 72 pages of analytical material

ACTIVITIES/INTERESTS

Hobbies: Chess; Math Puzzles; Fitness; Traveling; Writing Poetry; Sailing; Chaos Theory; Reinforcement Learning