Roman Samoilov

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Education

Lomonosov Moscow State University, Faculty of Mechanics and Mathematics **Moscow, Russia**
Specialist, Stochastic Financial Mathematics and Economics *Since Sep 2021*
- Joint specialisation with Vega Institute Foundation.
- Scientific Supervisor: Prof. Ekaterina Vadimovna Bulinskaya.

Professional Experience

Laboratory of Market Microstructure, Vega Institute Foundation (VTB Group) **Moscow, Russia**
Researcher *Since November 2024*
- Feature engineering and Prediction of trading volumes based on testing in the Rama Cont model of the stock book model

Projects & Scientific Work

`Strategy Backtest in Uniswap V3 pool` **Moscow, Russia**
Lomonosov Moscow State University, Faculty of Mechanics and Mathematics *September 2023 – December 2023*
- This is a project dedicated to the development and testing of liquidity placement strategies in uniswap v3, which includes working with GraphQL, delta hedging of the portfolio and the development of utility functions for a specific task.

`C++ project on Network Programming` **Moscow, Russia**
Lomonosov Moscow State University, Faculty of Mechanics and Mathematics *September 2023 – December 2023*
- Development of a system for testing exchange strategies, automatic loading of up-to-date data from the exchange, as well as checking hypotheses about the dependence of futures prices and the underlying asset.

`Econometrics project on Determinants of admission to MSU` **Moscow, Russia**
Faculty of Mechanics and Mathematics, Vega Institute Foundation *Jan 2024 – May 2024*
- Using panel econometric model investigated the relationship of indicators from the lists of applicants and passing scores.

`Improving Russian Stock Market Volume Prediction Models` **Moscow, Russia**
Lomonosov Moscow State University, Faculty of Mechanics and Mathematics *September 2024 – December 2024*
- This study is devoted to modeling and improving models for forecasting intraday time series of trading volumes on the Moscow Stock Exchange. The forecasting methods used are the upgraded PC-VWAP, as well as machine learning models: LSTM, XGBoost and Random Forest.

QUANTATON 2024 **Pushkin, Russia**
Participant *Jul 2024*
- Lectures and Hackathon on Derivatives Pricing in C++.
- Introduction to Data Science and ML tournament.
- Introduction to Decentralized Finance.

VEGA SUMMER SCHOOL 6 **Kaluga, Russia**
Seminarist *August 2025*
- Lectures and Hackathon on Derivatives Pricing in C++.
- Introduction to Data Science and ML tournament.
- Decentralized Finance hands-on study of AMM protocols, including Uniswap v2, v3 and v4.
- Study of the EVM (Ethereum Virtual Machine) and smart-contract development (Solidity).

Skills

Programming: C/C++, Python (numpy, pandas), R.
Software: Git, LaTeX, Wolfram Mathematica.
Language: Russian (Native), English (Intermediate).

Awards & Honours

Vega Institute Foundation Scholarship: Award for advanced studies in Mathematical Finance *Since Feb 2023*