Nikolay Pogrebnikov

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A university student with a strong interest in statistics, data analysis, and machine learning, eager to apply knowledge and skills to real-world problems while continuously developing expertise in the field.

Skills

- **Languages:** Python, R, Java, C++, C#, SQL.
- **Analytical Skills** Experienced in data analytics, and statistical modeling.
- **ML and Data Technologies:** PyTorch, numpy, pandas, matplotlib, Docker, Apache Kafka, SQLite.
- **Natural Languages** Native Russian, Intermediate English.

Education

Saint Petersburg State University **September 2021 – Present**
Bachelor's Degree Applied Mathematics and Computer Science
Relevant coursework:
Data Analysis, Machine Learning, Object-Oriented Programming, Statistical Analysis, Applied Statistics, Probability Theory.

Courses and certifications
- **Fundamentals of statistics** **September 2022 – October 2022**
- **Yandex algorithm training 2.0 (No certificate)** **August 2024 – September 2024**
- **Interactive SQL Simulator** **November 2024 – December 2024**
- **Yandex ML training 1.0 (No certificate)** **January 2025 – February 2025**

Practical Experience

Classification task using logistic regression **September 2021 – December 2021**
Research work
- Worked on a classification task
- Worked on the Python library Scikit-Learn
- Result in the form of a coursework text

Data streaming with Kafka Streams **September 2022 – December 2022**
Research work and Telegram Bot Development
- Developed a Telegram bot in C# for event management at the Far Eastern Federal University (FEFU), automating tasks such as registration and providing event information
- Using Apache Kafka for real-time message processing, event handling, and facilitating communication between the Telegram bot and the SQLite database
- Result in the form of a coursework text, Kafka application and Telegram bot

Linear regression for big data **February 2023 – May 2023**
Research work
- Comparison of the theoretically exact method of obtaining the result and gradient descent in posterior linear regression
- Parallel implementation of the method in the R language
- Result in the form of an accepted pooled request
- Result in the form of a coursework text

Function Optimization Methods with Qt **November 2024 - December 2024**
Research work and GUI Application Development
- Developed a C++ Qt-based application for optimizing mathematical functions, implementing methods such as Random Search and Newton's Method
- Designed an interactive graphical interface to visualize optimization processes, including contour plots and user-defined search areas
- Source code and documentation available on GitHub

SSA for time series, variants of Circulant SSA, comparison of methods **September 2023 – Present**
Research work
- Worked on singular spectrum analysis (SSA) method for dividing time series into components such as trend, seasonality, noise
- Implementation of Circulant SSA modification in R language and comparing it to the basic SSA
- Intermediate result in the form of a coursework text