My name is Bogdan Slišković, and I am a final-year student at the Faculty of Economics, University of Belgrade, majoring in <u>Applied Statistics and Quantitative Analysis</u> with a GPA of 8.53 and an average grade of 9.8 in statistics-related courses. During my studies, I have developed strong analytical skills, complemented by a deep interest in data science and machine learning.

In parallel with my formal education, I completed two academic research projects based on the 2007 Living Standards Measurment Survey in Serbia:

- "Evaluating the Impact of Education on Reservation Wage in Serbia" An econometric study in STATA using 2SLS to address endogeneity
- "Estimating Average Wage in Serbia" A Python-based research project focused on wage determination and GDP estimation using sampling theory. I designed and implemented a fully object-oriented analytical framework, developing custom classes for bootstrap resampling, linear regression, and inference through both simple and stratified random sampling. The solution emphasized modularity, transparency, and statistical rigor, and was built entirely without relying on external modeling libraries.

Throughout my studies and internships, I have gained practical experience with both supervised and unsupervised learning. I am proficient in Python, particularly with NumPy, Pandas, and Scikit-learn libraries. More recently, I have been exploring deep learning frameworks like TensorFlow and Keras. Additionally, I actively maintain a well-documented GitHub repository showcasing my *ML projects*.

One of my most valuable machine learning projects was <u>building a Logistic Regression class</u> from scratch in Python, without relying on high-level libraries. The project was designed with a strong focus on object-oriented structure, code clarity, and scalability. The model supports both binary and multiclass classification, includes L1 and L2 regularization with grid search over lambda values, and is trained using batch gradient descent with automatic learning rate decay. It features early stopping based on validation performance and tracks accuracy on both training and development sets throughout training. I'm extending this framework into a <u>custom Neural Network</u> class as part of my effort to explore deep learning at a more profound level.

During my summer internship at Beorol, I built a sales forecasting model in Python using a Voting Regressor that combined Linear Regression, XGBoost, and Random Forest. In a team setting, I also collaborated on a supply chain optimization project, where we built a Python tool that planned deliveries based on sales forecasts, inventory levels, and MOQ constraints. These experiences helped me develop a practical approach to applying ML in real business settings.

At the Statistical Office of the Republic of Serbia, I implemented a depreciation model for fixed assets based on the EUROSTAT methodology. I also developed a Python script to adjust investment data by reconciling subsector estimates with sector totals through the proportional allocation of residuals.

Additionally, I enjoy creating small tools that automate everyday tasks. Some examples include:

- A *Selenium script* that checks my university email and sends notifications to my phone.
- Git automation scripts that streamline repetitive push/pull operations.
- A Jupyter Notebook launcher with a file picker for quick access to my projects.

Thank you very much for your time and consideration. I truly appreciate the opportunity and would be excited to contribute and grow as part of your team.

Best regards, +381 60 7050144 <u>GitHub</u>
Bogdan Slišković <u>bogdansliskovic@gmail.com</u> <u>LinkedIn</u>