
Stanislava Mincheva

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Profile

Final-year Data Science student with experience in Python, SQL, machine learning, and statistical modelling across health-care and climate datasets. Built predictive models, conducted statistical validation for AI diagnostic systems contributing to FDA regulatory submissions, and co-authored a peer-reviewed publication. Seeking an entry-level data analyst or software engineering role focused on data-driven problem solving and analytics.

Technical Skills

Programming: Python, SQL, MATLAB

Data Science: Machine Learning, Statistical Modelling, Time-Series Analysis, Econometrics, Data Visualization, Data Management

Libraries & Tools: pandas, NumPy, SciPy, scikit-learn, TensorFlow, Matplotlib, Seaborn, Tableau, Jupyter, Git/GitHub, SQLite, DBEaver, L^AT_EX

Languages: Bulgarian (native), English (fluent), Russian (conversational)

Education

Central European University, Vienna, Austria

Expected June 2026

B.Sc. in Data Science and Society

GPA: 3.79 / 4.00 (Distinction)

Selected Coursework: Algorithms and Data Structures, Advanced Machine Learning, Advanced Probability and Statistics, Intermediate Econometrics, Optimization, Numerical Methods, Data Visualization, Mathematics for AI, Object Oriented Programming, Data Analysis, Data Management

Publication

“AI-driven semen analysis: transforming semen analysis for male infertility diagnostics,” *World Journal of Men’s Health*, 2025. Co-authored with Prof. Ashok Agarwal.

Projects

Healthcare Analytics: Patient Outcome Modelling (MIMIC-III) 2026

- Queried, cleaned, and processed large-scale ICU clinical data (40,000+ patient records) using SQL and Python (pandas, NumPy), handling missing values and irregular time-series structure.
- Built a pathogen alert classification system using for clinical safety.

Predicting PMSM Rotor Temperature and Torque 2025

- Developed CNN and Random Forest models in Python to predict temperature and torque in permanent-magnet synchronous motors.
- Engineered time-series features and benchmarked models using MAE and RMSE.

CO₂ Emissions and Fuel Use in Europe (ARIMA Analysis) 2025

- Analysed EU emissions and fuel consumption data (1990–2020) using regression and time-series modelling.
- Applied ARIMA models to forecast emissions trends, assess policy impact, and outperform a linear baseline on out-of-sample accuracy.

International Retail Coffee Price Dynamics 2022

- Modelled international retail coffee price margins as a stochastic random walk using MATLAB; presented findings to an external examiner panel.

Work Experience

CheckCells, Los Angeles, US

Jan 2025 – Present

Data & Strategy Intern

- Performed statistical validation of AI-based semen analysis models (sensitivity, specificity, Bland–Altman analysis) supporting 2 FDA regulatory submissions and 2 peer-reviewed publications.
- Co-authored peer-reviewed editorial on AI-driven semen analysis with Prof. Ashok Agarwal.
- Conducted data labelling and quality assurance for microbiology and semen sample datasets used in machine learning workflows.
- Analysed outreach and sales data to track response and conversion rates and inform targeting strategy.
- Conducted market and competitor analysis on AI diagnostics and clinical laboratory automation.

Intelektus, Los Angeles, US

Jul 2020 – Sep 2020

Business and Product Intern

- Conducted exploratory market analysis and prepared a white paper supporting early-stage product development.
- Assisted with software testing and user-flow analysis to improve product usability.
- Contributed research insights to investor presentation materials.

Leadership & Activities

Deputy President, Bulgarian Red Cross Youth

2021

- Organised volunteer initiatives supporting local communities and collaborated with international youth organisations.

Student Startup: Autonomous Aeroponics Farming System

2021

- Led financial strategy and external partnerships for the WWF-awarded autonomous aeroponics venture (1st place, Innovation Accelerator).

Awards

1st Place, WWF Innovation Accelerator Programme

2021

Selected from a competitive cohort of student-led ventures; secured seed funding for an autonomous aeroponics vertical farming concept.