Ekaterina Ustiukhina

Junior Data Scientist

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Passionate Data Scientist with hands-on experience in data analysis, statistical modeling, machine learning, and deep learning. Skilled in Python, SQL, and data visualization, with a strong foundation in optical engineering. Proven track record in analytical projects, research, software migration, and AI-driven solutions. Adept at developing and deploying ML models to extract actionable insights and drive innovation. Seeking to leverage analytical expertise and engineering background to contribute to innovative AI and data-driven solutions. Currently pursuing a Master's degree at Aalto University.

- Python, Matlab, SQL, Jupyter Notebook, Git
- Excel, Microsoft Azure ML Studio, Comsol
- LabView, Zemax, Data Visualization, SolidWorks, AutoCAD
- Statistical Analysis, Linear Regression, Predictive Modeling

EXPERIENCE

Project Engineer Intern　　　　　　　　　　　　　　　*June 2023 - July 2023*

ElFys, Helsinki, Finland

- Conducted EQE and responsivity measurements for photodetector chip testing, integrating data processing for accuracy improvement.
- Migrated legacy analysis software from Matlab to Python, utilizing Pandas, Numpy, and SciPy for data manipulation and linear regression, enhancing test efficiency and reducing computational time

Research Student　　　　　　　　　　　　　　　*September 2020 - January 2022*

ITMO University, St. Petersburg, Russia

- Developed and modeled luminance meter tools to measure urban light distribution, contributing to environmental data research.
- Authored several papers focusing on data modeling and analysis in luminance metering, with one project earning recognition at the Russian Congress of Young Scientists.
- Applied statistical analysis and developed software for light measurement, reinforcing skills in data-driven environmental assessment.

Publications and Research Awards

- Modeling of a luminance meter for urban light distribution measurement. Collection of Theses of Young Scientists, ITMO University, 2022.
- Development of a luminance meter model for assessing urban light environments. Annotated Collection, ITMO University, 2021.
- Received the "Best Research Thesis" award at ITMO University, 2021.

EDUCATION

Master of Science: Signal Processing and Data Science (*Minor* in *Applied Optics*)　　*September 2024 - present*

Aalto University, Espoo, Finland

- Conducted Bone Age Prediction Project using Deep Learning: [Jupyter Notebook; Report]
- Weather Effects on Domestic Trips in Finland: [Project Report]
- Predicting AIDS patient survival in a drug study: [Project Report]

Bachelor of Science: Laser and Optical Engineering　　　　　　*September 2016 - June 2021*

ITMO University, Saint-Petersburg, Russia

- Coached University table tennis team (2017-2018) and managed the billiard team
- Competed and won regional and university-level competitions in table tennis

INTERESTS

Racket Sports: Playing almost every racket sport including tennis, table tennis, padel and badminton.
Hackathons: Fan of all sorts of Hackathons. (Junction, UltraHack, etc.)