Ksenia Zagvozdina

Istanbul, Turkey | xenia.zagvozdina@yandex.ru | +905451878316 | [LinkedIn](#) | [GitHub](#)

Experienced Analyst with over 4 years of experience in academia and business. Skilled in data analysis using Python, building machine learning models, and conducting research.

- Found data inconsistencies that have remained unnoticed before while doing the test task (even before landing a project job).
- Built an internal fraud detection model using machine learning algorithms, which resulted in significant savings of over 10 million RUB for the bank within the first week of implementation.
- Published a [paper](#) in the Journal of Physics and presented it at an international conference as a result of Master's research (using Palabos, open source C++ library).

Work experience

Teaching Assistant (Numerical Methods, Complex Calculations Programming, Data Analysis) at Higher School of Economics, 09/2019 – 08/2022

Higher School of Economics is one of the biggest universities in Russia, Applied Mathematics was in the top-100 math programs in the world according to QS rating.

- Assisted in creating study materials for 4-year Bachelor's (NM), 1-year Master's (CCP), and 1-year Bachelor's using Python libraries (numpy, pandas, scipy, scikit-learn).
- Taught seminars on Numerical Linear Algebra, Ordinary and Partial Differential Equations, basics of Probability Theory and Statistics, focusing on Hypothesis Testing.

Achievements:
- Created a set of auto-graded homeworks using Python libraries (numpy, scipy, pandas) with coverage tests on PDEs that got accepted into the Numerical Methods course program.

Data Analyst/Engineer at a VC project (freelance), 01/2021 – 05/2021

VC Project was a part of the work done in economics department of a US university.

- Developed data quality monitoring system using Python to comply with requirements.
- Organized data to support efficient querying and, later, analysis.
- Defined the structure and relationships of data entities.
- Documented data pipelines and workflows to share knowledge within the project and maintain a record of the data infrastructure.

Achievements:
- Completely transferred data processing system from Excel to Python (pandas), having saved up to 50% time and making it more suitable for analysis and visualization.

Credit Risk Analyst (Intern for 6 months at first) at Rosbank, 05/2018 - 07/2019

Rosbank at that time was a part of Societe Generale Group and was voted the safest bank in Russia according to client survey.

- Analyzed retail credit risks by working with big datasets on bank products.
- Tested external services to enhance decision-making logic.
- Conducted hypothesis testing to inclusion into anti-fraud model.
- Prepared weekly and monthly accounting reports using Power BI.
- Collaborated in creating an automatic single alert notification tool.
- Maintained up-to-date technical documentation for databases and process logic in Confluence.

Achievements:
- Created an auto-rejection system for a new in-app crediting initiative in close collaboration with the Data Engineering Department; the system was later integrated in the main decision-making system.

Education and skills

st. 2023 Turkey	PhD, Earth System Sciences. *Tsunami propagation* Istanbul Technical University
2023	Algorithms Training *Algorithms & Data Structures in Python* Yandex
2020	Deep Learning in Computer Vision *TensorFlow* Coursera
2020	Programming challenge *Bash, Linux and algorithms in C* School 21
2018–2020 Russia	MA, Supercomputer Modeling. *Lattice Boltzmann Method for various hydrodynamics problems* Higher School of Economics
2013–2018 Russia	BA, Applied Mathematics. *Explicit integration methods with large stability domains for solving hydrodynamics problems* Bauman Moscow State Technical University

Skills & Tools

Python (numpy, scipy, pandas, scikit-learn, TensorFlow) | C++ | MPI | OpenMP | CUDA | Numerical Methods | Mathematical Modeling | TeX | MATLAB | Wolfram Mathematica | R | SQL | SAS | Power BI | Confluence | Jira