ARTEM
FEDOROV

data scientist

PERSONAL INFORMATION

First-year Master's student at the Faculty of Computational Mathematics and Cybernetics, Lomonosov Moscow State University, enrolled on a state-funded basis. Aspiring to build a career as a Data Science developer, with a strong interest in scientific research projects. During my work at the faculty's research laboratory, I established myself as a lead developer and a valuable member of the research team.

KEY STRENGTHS

Tech Stack

Python, PyTorch, sklearn, FastAPI, SQLAlchemy, JavaScript, JSReact, PostgreSQL, NumPy, Pandas

Personal Qualities

Goal-oriented, reliable, strong team player with the ability to work within strict schedules; leadership skills; proficient in English.

ОПЫТ РАБОТЫ

SberBank Robotics Center (SberRobotics) – Senior Engineer — September 2024 – Present

Working in the Manipulation Department, which focuses on applying diffusion models to imitation learning — enabling robots to perform a wide range of tasks based on human demonstrations. My responsibilities include testing and optimizing policy inference, as well as validating hypotheses on training diffusion models to improve task performance.

Key Achievements

- Automated the calibration pipeline for sensors such as cameras and inertial measurement units (IMUs).
- Applied a Bayesian approach to motion/manipulation phase detection in video datasets for automated annotation.
- Developed an inference control framework to smooth policy-predicted trajectories using robust optimization methods.
- Pretrained and fine-tuned several VLM/VLA architectures, including pi0 (Physical Intelligence) and Nvidia Isaac-Gr00t, on large-scale datasets.

Bayesian Group, Higher School of Economics – Research Assistant — January 2025 – Present

Conducting R&D focused on optimizing diffusion models and exploring their applications in applied domains, particularly economics.

Key Achievements

- Developed a novel general-purpose scheduler for diffusion model sampling, competitive with DEIS and UniPC methods (manuscript in preparation).

Institute for Artificial Intelligence, Lomonosov Moscow State University (Laboratory of Semantic Text Analysis) – Research Assistant — October 2022 – Present

Worked on the "News Collider" project, focused on intelligent text analysis, automatic annotation, and text generation. Served as a member of the research team developing large language models (LLMs) for the laboratory's needs.

Research Achievements

- Developed a method for creating and analyzing interpretable embeddings of text fragments and labels for multilabel classification tasks, which improved quality control over annotators, dataset construction, and label design.
- Prepared survey reports on existing span-classification methods and presented them at laboratory seminars.
- Currently researching methods for automatic span recognition in unlabeled texts as part of ongoing coursework.
- Contributed to several publications on semantic text analysis, particularly human value detection.
- Currently leading a research subgroup on mono-/polysemous concept modeling in modern LLMs and semantic text analysis.

Development Achievements

- Built both backend and frontend (ReactJS + FastAPI) for a high-load text annotation tool, gaining practical experience in web application development.
- Designed and maintained the project's PostgreSQL database.
- Supervised a student team working on the annotation tool.
- Maintained documentation and formalized technical requirements based on user feedback.

PAPER PUBLICATIONS

- **Does Annotating Multi-Spans Improve Classification in Considerable Text Collections?**
  - **DOI: 10.1109/ICSAI65059.2024.10893762**
  - **https://www.researchgate.net/publication/389370366_Does_Annotating_Multi-Spans_Improve_Classification_in_Considerable_Text_Collections**
- **Automated detection of human values in texts: ML challenges and performance benchmarks**
  - **DOI: 10.13140/RG.2.2.19821.09448**
  - **https://www.researchgate.net/publication/389051844_Automated_detection_of_human_values_in_texts_ML_challenges_and_performance_benchmarks**

EDUCATION

Specialized Physics and Mathematics School No. 1466 named after Nadezhda Rusheva 2010 – 2021

Lomonosov Moscow State University (MSU), Faculty of Computational Mathematics and Cybernetics. Bachelor's Degree in [your exact field, e.g., Applied Mathematics and Informatics] — 2021 – 2024

- Graduated with honors (Red Diploma), GPA: 4.96 / 5.0
- Supervised by Archil Iverievich Maisuradze and Konstantin Vyacheslavovich Vorontsov

КОНТАКТЫ

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