Yuri Temiraev

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SUMMARY

Data Analyst with 4+ years of experience in research. BSc in Physics (2020), MSc in Bioinformatics (2022). Completed 7+ research projects. Proficient in statistical data analysis and clean data visualization. Built 10+ projects for myself, including web scrapers and parsers, bots, and training ML/DL models.

SKILLS

Languages	Python, R, MySQL/PostgreSQL, UML
Libraries	numpy, pandas, scipy, sklearn, matplotlib, seaborn, plotly, pytorch, networkx
Tools & Frameworks	Linux, Git, Docker, Jupyter, Conda

WORK EXPERIENCE

Ioffe Institute | Laboratory for Experimental Astrophysics   Nov 2020 – Dec 2023
Research Engineer

- Applied EM algorithm using mixtures of skewed distributions for event clusterization (paper in prep.)
- Implemented an ETL pipeline aggregating external data parsing and MySQL data to refine event coordinates
- Analyzed ~50 selected events with precursor emission and discovered a peculiar relation between peak energy and flux; developed a statistical algorithm to search the diagram for linear segments (paper published)
- Tested newly calculated detector response matrix on event data and compiled a comprehensive visual report, which allowed the team to make a data-driven decision to reject the new matrix

PROJECTS

Gevo ↗ | Python, networkx, numpy

Python OOP implementation of Markov Process simulation on graphs.

Grbml ↗ | Python, R, rpy2, pandas, numpy, plotly, matplotlib

Machine Learning applied to cosmic gamma-ray burst clusterization done by integrating Python & R via rpy2.

Nwport ↗ | Python, Jupyter, numpy, networkx, matplotlib

Research project in the framework of the International Scientific School on Mathematics & Neuroscience (2021):
- Explored matrix characteristics of model networks and human brain connectomes
- Collaborated in a team of 5 people overseen by a project manager to meet tight deadlines
- Implemented simulation of attacks on networks, animation, and visualization
- Led the project presentation as a speaker to an audience of diverse professional backgrounds

EDUCATION

2022	**Alferov University**	Saint Petersburg, Russia
	Master of Bioinformatics, *cum laude*	
2020	**Peter the Great Polytechnic University**	Saint Petersburg, Russia
	Bachelor of Physics	

PUBLICATIONS

Svinkin, Temiraev, et al. (Dec. 2020). "Spectral evolution of long gamma-ray bursts observed with Konus-Wind". In: *Journal of Physics Conference Series*. Vol. 1697. doi: 10.1088/1742-6596/1697/1/012003.

Burns, Svinkin, et al. (Mar. 2023). "GRB 221009A: The BOAT". In: *The Astrophysical Journal Letters* 946.1, p. L31. doi: 10.3847/2041-8213/acc39c.

Zhukov, Kipyatkova, and Temiraev (Dec. 2023). "Network models of innovation diffusion". In: *Tomsk State University Journal of Control and Computer Science* 65.