Anastasiia Semina

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Data scientist with skills in machine learning, statistical analysis, and deep generative models. Experience in process automation, development of forecasting solutions and operational design of generative models such as Flux and Stable Diffusion.

EXPERIENCE

Gazprom Automation-Service | *Data Scientist, Engineer* Feb. 2024 - Present

- **Automatic scheduling**

  I engaged in a project focused on forecasting production volumes and identifying critical production plant metrics to optimize operational efficiency.

- **Mentorship of 2 interns**

  Mentored two interns in conducting statistical analysis for three technical installations, leading to the proposal of several data-driven production forecasting methods. Guided them in Python and statistical modeling.

BIA Technologies | *Junior Programmer Trainee – Junior Machine Learning Engineer* Aug. 2022 - Aug. 2023

- **Automation of planning process**

  I automated task planning in Jira by gathering requirements, assessing tools and algorithms for optimal task allocation, coding the solution, and collaborating with a user interface designer. The planning process was comprehensive, it considered factors like deadlines, priorities, sequencing, people competencies, and capabilities, using technologies like OptaPlanner and DoCPLEX.

- **Layoff Prediction and Employee Attrition Analysis**

  I developed a predictive model to forecast layoffs and analyze employee attrition reasons, aiming to proactively address retention issues and reduce turnover.

Gazprom Invest | *Trainee Business Analyst* June 2022 - July 2022

I wrote technical and design specifications for the implementation of a 1C database and user interface for recording violations in production.

SKILLS

Languages: Python, SQL, LaTeX
Tools: Git/GitHub, Bash, PyCharm, VS Code, MS Office, Atlassian Jira, Atlassian Confluence, Docker
Libraries: matplotlib, seaborn, sklearn, opencv, pytorch, ultralytics, diffusers, nltk, gensim, spacy, cplex, pyomo

EDUCATION

Master's in Artificial Intelligence	Sep. 2023 – Aug. 2025
ITMO University	*Current GPA: 5.0/5.0*
Bachelor's in Informational Systems and Technologies	Sep. 2019 – Aug. 2023
ITMO University	*GPA: 4.0/5.0*
Project and Product Management	2022
Tinkoff courses	

PROJECTS AND COURSES

Prompt engineering and experiments with custom Flux LoRAs | *webui-forge, webuiapi* 2024
Neuroproduction project at EveryPixel.

Deep generative models course | *diffusers, VAE, GAN* 2024

- Developed Bayesian models and implemented autoencoders.
- Implemented GAN and sampled images in the StyleGAN latent space.
- Trained Stable Diffusion v1.5 using Dreambooth method and fine-tuned LoRA models.

Prompt engineering for Stable Diffusion 2023 – 2024
- Prompt engineering and comparison of models for a NymphLens telegram bot that helps individuals create social media photos by automatically generating images with their faces.
- Photo generation for Wonderslide project: realistic portraits of people, abstract figures, various objects.

Computer Vision course | *Multi-class classification, Anomaly detection, Self-supervised learning* 2023
- ResNet realisation in pytorch.
- Experiments with variational autoencoder.
- Multi-class classification using a dataset with missing labels during training.

RoadSignsDetector | *YOLOv8, RTMDet* 2023
Web application for real-time road signs detection.

ACHIEVEMENTS

MegaOlympiad ITMO 2023
- Artificial Intelligence - Top 5 out of 200+ participants.
- Game-theoretic modeling - Top 3 out of 90+ participants.