Alexander Tereshin
Machine Learning Engineer

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EXPERIENCE

Teaching and Research Assistant — Sep 2025 – Present
Higher School of Economics (HSE University)
- Assist NLP course, responsible for grading practical assignments and exams covering the full modern NLP stack: from foundational models (**Transformers**, **BERT**) and semantic search (**vector databases**) to advanced LLM fine-tuning (**PEFT**, **TRL**) and optimization techniques (**quantization/GPTQ**).

Machine Learning Engineer — Jun 2024 – Present
Raiffeisenbank
- Engineered an asynchronous API pipeline implemeting **Litestar**, **FastStream**, and **RabbitMQ** to scale internal service comment labeling 10x (from 200 to 2K/day), leveraging **Few-Shot Prompting** and **Chain-of-Thought** with **Qwen3-32B** model and the **OpenAI Client** to achieve **92% accuracy**;
- Developed a hybrid RAG system automating 80% of HR queries by combining **BM25** and **BGE-M3** retrievers within a **Milvus** vector database, reducing response resolution time from hours to seconds;
- Won 1st place in a company-wide hackathon by developing an AI HR platform that parsed resumes using **Docling** for PDF processing combined with **Structured Output (SO)**, and automated candidate scoring and personalized training simulations through agentic workflows powered by the **OpenAI SDK** and **Function Calling**;
- Designed and deployed 4 end-to-end batch prediction pipelines for employee burnout classification, which included feature engineering on data from **HDFS** using **PySpark**, orchestrating jobs with **Apache Airflow**, training a **LightGBM** core model that achieved an **81% F1 score**, and implementing automated monitoring with **Evidently AI**; transitioned the system from a research prototype to a production tool for 200+ managers.

Data Scientist — Jun 2023 – Feb 2024
VseInstrumenti.ru
- Run Data Science for three core products on a 12M+ MAU platform to measure and optimize product impact, executing 40+ online A/B tests with advanced variance reduction techniques (**Stratification, Delta Method**) to drive a $25K monthly revenue increase, and applying quasi-experimental methods like **Propensity Score Matching** to estimate the effect of BNPL offers;
- Developed and deployed forecasting models using both statistical (**SARIMAX**) and gradient boosting (**CatBoost**) methods to predict key business metrics, achieving an average **11% MAPE**. Also mentored 2 data analysts in the end-to-end Time Series Forecasting process.

Data Scientist — Jan 2023 – Jun 2023
Sportmaster
- Applied **Logistic Regression** model to research the main drivers of workplace safety incidents, delivering insights that guided risk reduction strategies. Developed a **SARIMA** time series model for inventory loss forecasting.

EDUCATION

Higher School of Economics (HSE University) — Sep 2023 – Jun 2025
Master's degree in Machine Learning and High Load Systems — *GPA: 8.29/10*

Saint Petersburg State University of Civil Aviation — Sep 2016 – Jun 2021
Bachelor's degree in Maintenance of Aircraft and Engines

SKILLS

Programming & ML: Python, PyTorch, Transformers, RAG, Agentic Workflows, Vector Databases (Milvus)
MLOps & Orchestration: Apache Airflow, Kubernetes, Docker, CI/CD, MLFlow
Data & Databases: PySpark, SQL, Hadoop, Hive, MongoDB, AWS S3
Backend & Tools: FastAPI, Litestar, Kafka, RabbitMQ, Redis, Bash, Linux, Git, Pytest, R, LaTeX
Languages: English (B2), Russian (Native)