

Mikhail Vasiliev

Deep Learning Engineer

Experience

2025— **Senior Machine Learning Engineer**, *Raiffeisenbank* present

2023—2025 **Senior Machine Learning Specialist**, *Makves*

Project: Development and implementation of RAG system

- Developed and implemented a RAG system for automating customer request processing
- Optimized system hyperparameters using Ragas library and GigaChat LLM

Tools: LangChain, Ollama, Saiga, GigaChat, HuggingFace, Fast-API, Ragas

Project: Creation of a comprehensive security solution for corporate networks based on unstructured data

- Implemented a neural network module for detecting violations of personal data laws, increasing detectable classes from 14 to 36 with top 1 accuracy reaching 98.9
- Developed a module for analyzing scanned document content: text, tables, stamps, signatures and corporate forms detection, increasing classes from 5 to 19 with mAP@.5 improved from .89 to .94
- Implemented sensitive data detection in text files with added NER module
- Created an ensemble of algorithms for anomaly detection in tabular data, including time series
- O Developed sensitive data detection in audio files
- Collected and organized labeling for 8 datasets for classification and object detection tasks

Tools: transformers, YOLO, PyOD, Pandas, Sklearn, PyTorch, lightning, NumPy, HuggingFace, ONNX, FastAPI, uvicorn, PyInstaller, optimum, CatBoost, CVAT, natasha

***** April 25, 1987

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Personal Projects

2024 **Team Lead and Technical Expert**, CheckDocAI

Project: Telegram bot with AI module for document quality control for Gulfstream LLC, significantly reducing verification time and improving accuracy

- Led a team of two data scientists and a backend developer, responsible for project development and implementation
- Successfully deployed for commercial use with monthly savings of 40 man-hours

Tools: aiogram, YOLO, ONNX, Albumentations, CVAT

Hackathons

2024 VK HSE Data Hack, 1st place

Hackathon for news article classification into 21 categories. Our solution combined results from a small transformer-based classifier and LLM predictions

- Enriched the dataset
- Selected zero-shot classification model
- Trained classifier model
- Coordinated team work
- Presented results

Tools: transformers, Saiga3 8b, taiga dataset, streamlit

Talks

- 24.05.2025 Anomaly Detection with Python: from theory to practice, *Positive Hack Days*
 - 2025 **Lecture Series: Anomaly Detection in Data, Algorithms**, *Moscow Python Meetup*
- 2024—2025 NLP and CV Neural Networks in Data Protection: Makves DCAP Experience, Moscow Python Meetup

Education

- 2024 **Data Analysis with SQL**, *Training Center "Specialist"*, professional development
- 2022—2023 **Computer Vision Engineer**, *Deep Learning School, MIPT*, professional retraining
 - 2022 **Data Science Specialist**, *Yandex Practicum*, professional retraining
- 2021—2022 **Introduction to AI and Neural Networks for Aviation Applications**, *MAI*, professional development
- 2005—2008 **Translation and Translation Studies**, *MAI*, specialist degree
- 2003—2009 **Aviation and Space Thermal Engineering**, *MAI*, specialist degree

Languages

Russian	native
English	B2
German	B2
Esperanto	B2

Skills and Technologies

 Deep Learning Python Pytorch o LLM, RAG o SOL Lightning o NLP, NER Linux Pandas Computer Docker o NumPv Vision o YOLO Sklearn Speech Natasha FastAPI o ONNX Recognition uvicorn HuggingFace Machine o PyOD learning Ragas o PvSAD Anomaly Ollama Optimum o pywin32 Detection U-Net Data analysis AirFlow CatBoost o Data o MLFlow XGBoost visualisation o CVAT PostgreSQL Plotly Statistics MySQL

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