

# Mikhail Vasiliev

# Deep Learning Engineer

# Experience

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

Project: Development and implementation of RAG system Tools: LangChain, Ollama, Saiga, GigaChat, Python, Hugging-Face, PyTorch, FastAPI, Ragas

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

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

Tools: python, transformers, EfficientNet, MobileNet, YOLO, PIL, PyOD, pandas, sklearn, pytorch, lightning, numpy, matplotlib, plotly, huggingface, onnx, fastapi, uvicorn, pyinstaller, pywin32, optimum, airflow, mlflow, cvat, natasha

- 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
- O 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
- O Created an ensemble of algorithms for anomaly detection in tabular data, including time series
- Developed sensitive data detection in audio files
- Ocollected and organized labeling for 8 datasets for classification and object detection tasks

\* April 25, 1987

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**③** onixlas.github.io • **in** michael-vasiliev-ds

# 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.

Tools: aiogram, YOLO, ONNX, Albumentations, CVAT

- 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

### 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

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

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

#### 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*
- 29.01.2025 NLP Neural Networks in Data Protection: Makves DCAP Experience, Moscow Python Meetup № 98
- 25.06.2024 Training and Applying Neural Networks as a Module of Russian DCAP System, Moscow Python Meetup  $N^{o}$  91

#### 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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