Tatiana Sycheva

(eligible to work without restrictions)

Data Scientist, Computer Vision (ML) Engineer

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Computer Vision Engineer at Wildberries, Russia's largest online retailer and marketplace (over 75 million customers), working in the Horizontal ML team. Our team develops and deploys machine learning solutions across multiple domains including FinTech, Search & Ranking and Reputation Management. Skilled in Python, deep learning, AI frameworks, model optimization and API deployment. Experienced in data analysis with a strong aptitude for solving interdisciplinary challenges and quickly adapting to new technologies. MSc in Data Science (fully English-taught) from HSE University, graduating with honors.

TECHNICAL SKILLS

Languages: Python, SQL;

Frameworks & Libraries: PyTorch, TensorFlow, Scikit-Learn, Pandas, NumPy, OpenCV, Hugging Face Transformers, Flask;

Tools: Git/GitHub/GitLab, ClearML, PostgreSQL, Jupyter/Colab, PyCharm, VS Code;

Models & Techniques: BERT/RuBERT, DistilBERT, FRED-T5, FastText, BiLSTM, YOLO (v5/v11), CycleGAN, FDA;

EDUCATION

National Research University – Higher School of Economics September 2022 – July 2024
Master's degree in Computer Science (with honors)

- **Courses:** Applied Statistics, Linear Algebra in Applications, Information Theory and Combinatorial Theory of Search, Machine Learning and Data Mining, Deep Learning, Graph Algorithms, Large Scale Machine Learning, Modern Methods of Data Analysis, LLM, NLP.
- **Thesis:** Enhanced Graph Neural Networks (GNNs) with anisotropic filters derived from Laplacians to improve Graph Anisotropic Diffusion (GAD) layers. Evaluated model performance on the ZINC dataset for predicting molecular solubility.

PROFESSIONAL EXPERIENCE

Computer Vision Engineer
Wildberries, Horizontal ML Team March 2025 – Now

- Conducted ad-hoc analyses of model metrics and hypothesis testing, providing actionable insights for team decisions.
- Built synthetic data generation pipelines with advanced augmentations (FDA, CycleGAN) and deployed via Flask APIs.
- Fine-tuned YOLO (v5/v11) with transfer learning and full training for domain-specific detection tasks.
- Optimized multi-class models using Optuna (ASHA), improving accuracy in production experiments.
- Developed a binary classifier to filter non-text images, reducing unnecessary OCR calls and boosting pipeline efficiency.
- Enhanced product ranking models through targeted feature experiments, achieving **+0.3% NDCG lift** in search relevance.

Data Scientist intern
Wildberries, User Reputation Team October 2024 – March 2025

- Contributed to a machine learning project focused on detecting obscene language in reviews and identifying veiled words
- Utilized LLM transformer models and fine-tuned BERT (RuBERT for the russian language) for classification and NER tasks. Trained FastText and BiLSTM models and employed regular expressions
- Achieved the highest predictive performance among 32 candidates during the model evaluation

PUBLICATIONS

- Sycheva T., Smolyar I., Beketov M. (2025). Dimension-augmented anisotropy in Graph Neural Diffusion. AI in Drug Discovery Workshop, International Conference on Artificial Neural Networks (ICANN 2025). Springer (in press)