Katsiaryna Dankova

ML Engineer

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Summary

Developer with 1.5 year of experience in machine learning sphere. I specialize in natural language processing, classical machine learning and computer vision. With practical experience in solving business problems, I'm eager to apply my strategies and methods to help your company achieve its objectives.

Hard Skills

Languages: Python, C++

Data Manipulation: NumPy, Pandas, Polars, SciPy

Data Visualization: Matplotlib, Seaborn, Plotly

Machine Learning: Scikit-Learn, XGBoost, Catboost, LightGBM

Deep Learning: PyTorch, TensorFlow, Keras

Web Frameworks/UI: FastAPI, Streamlit, Tkinter, PyQT

Technologies: Jupyter, Anaconda, pip, virtualenv, poetry

Version Control: Git, GitHub, GitLab, BitBucket

Operating Systems: macOS, Linux

Soft skills

- Interpersonal communication
- Attention to details
- Forward thinking
- Self-motivation
- Speaking in public, to groups, or via electronic media
- Creating development plan
- Keeping deadlines
- Sticking schedule
- Team worker
- Quick learning ability

Experience

Technical Support Bot

Period: June 2023 – September 2024

Industry: Customer Support, E-commerce

Project Description: Developed an NLP-driven bot assistant to handle user queries by learning from FAQ documents and historical support dialogues, aiming to reduce the workload on technical support specialists.

Technologies: Python, TensorFlow, spaCy, scikit-learn, FastAPI, Docker, Git

Participation/Responsibilities:

- Developed NLP model for the support bot, achieving an accuracy of 85% on intent recognition, even with imbalanced classes.
- Utilized TensorFlow and spaCy to preprocess and train models on real-world dialogue datasets.
- Developed and maintained data pipelines for continuous integration of new dialogue data.
- Collaborated with the NLP specialist to fine-tune models, improving response time by 30%.
- Integrated the bot into the existing support system using FastAPI, enhancing user interaction efficiency.
- Used Docker for seamless deployment and scaling of the bot service.
- Conducted A/B testing to measure user satisfaction, resulting in a 20% increase in positive feedback.

Pet Projects

Salary Prediction using BERT

Tech: NLP

Project description: A salary prediction model based on job description text. The project aims to predict salary ranges by leveraging BERT's semantic understanding capabilities, enabling the extraction of relevant patterns from job requirements and descriptions. The system processes text data from job postings, tokenizes the descriptions, and uses BERT embeddings to train a regression model for accurate salary predictions.

Technologies: NumPy, Pandas, Matplotlib, Transformers (Hugging Face), Scikit-learn, PyTorch

Toxic Comment Classification using BERT

Tech: NLP

Project description: A toxic comment classifier aims to identify and categorize toxic comments, enabling automated moderation of user-generated content. BERT's contextual embeddings are leveraged to capture semantic nuances in text, making it suitable for complex language-based classification.

Technologies: NumPy, Pandas, Transformers (Hugging Face), PyTorch, Scikit-learn, Matplotlib

Face Security Application

Tech: Computer Vision

Project description: The application sets up a real-time facial recognition system that detects faces in the camera feed, matches them against a known database of faces, and displays the results on the screen, including the detected faces, their names, and the distance between the detected embedding and the known embedding.

Technologies: NumPy, Pandas, CV2, Face Recognition Package, Pickle, Docker

User Churn Prediction

Tech: Classic ML

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Project description: Creating and training a model that predicts with what probability a user will refuse the company's services based on a large number of parameters such as: monthly TV expenses, subscription duration, payment method, etc. This allows the company to react in time to certain user actions and maintain users' loyalty.

Technologies: Scikit-Learn, Pandas, NumPy, Matplotlib, Pickle

Education

	Bachelor of Computer Science
2022 - 2026	*Faculty of Applied Mathematics & Computer Science*
	Belarusian State University
	Algorithms & Data Structures | Computer Graphics Programming
Autumn 2023	*Faculty of Applied Mathematics & Computer Science*
	Belarusian State University
	Deep Learning School
Spring 2024	*Faculty of Applied Mathematics & Computer Science*
	Moscow Institute of Physics and Technology
	Data Analysis
Summer 2024	*Tinkoff Education*
	Algorithms & Data Structures
Summer 2024	*VK Education*
	Supervised Machine Learning: Regression and Classification
	Advanced Learning Algorithms
Autumn 2024	*Stanford University, DeepLearning.AI*
	NLP Workshop Intensive
Autumn 2024	*Moscow Institute of Physics and Technology, ecom.tech*

Languages

Belarusian, Russian	**English**	**Polish**
Native	Upper Intermediate	Pre-Intermediate