Timofey Brayko

ML-Engineer
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SUMMARY

I am a machine learning engineer with **almost 2 years of experience** in both **Computer Vision** and **NLP**. I enjoy researching and implementing new ideas, as well as building ML systems and complex model interaction pipelines. In addition, I am highly interested in Explainable AI and Reinforcement Learning.

EXPERIENCE - 2 YRS

PLATES DETECTION | May 2025—Present (Company Intership)

Offline system that detects and recognizes vehicle license plates of post-Soviet countries, designed as a lightweight solution for Raspberry Pi.

- Deeply explored and fine-tuned **YOLOv11** and **D-Fine** models for plate and vehicle detection.
- Developed a semi-supervised labeling pipeline with **PostgresSQL** integration.
- Expanded labeled dataset by over one million images using SSL technique, improving detection metrics **by 20%**.
- Achieved 70% accuracy using classic computer vision algorithms.

ITECH INC UZBEKISTAN | May – Oct 2023

ML-powered solution for detecting company stamps and recognizing signatures, aimed at automating verification and securing internal workflows.

- Fine-tuned YOLOv7 for detection and EfficientNet for recognizing handwritten signatures.
- Achieved **87% accuracy** on signature recognition.
- Conducted **extensive EDA cycle** and prepared data for training.
- Successfully bound **Swagger API services** with deployed models.

PROJECTS

A-SHOT | github.com/IU-Capstone-Project-2024/A-Shot

Multiplatform tool that utilizes computer vision to simplify the photo culling process for photographers.

- Researched exsited solutions and integrated ML model in deployment using ONNX.
- Deployed and optimized model execution time **by 32%**.
- Assisted in creating model to detect blur images.

TEXT COMPRESSION | Feb 2025 - Present

Participated in a study exploring a novel method of text representation by sequence compressing techniques using **GPT**, **BERT** and **T5 models**.

- Conduct a comprehensive review and explore **over 30 papers**.
- Deeply explored and experimented with **BERT** and **T5** architectures.
- Conduct several experiments to explain model inner functionality.

HACKATHONS

OZONCUP 2024

- Developed an ML model capable of filtering smoking images.
- Improved F1-score by conducting experiments on over 5 models, including MobileNet, EfficientNet, ViT, BeiT, SWIN.

EDUCATION

INNOPOLIS UNIVERSITY

Bachelor of Computer Science
Expected: July 2026
Track of Applied Artificial Intelligence
GPA: 4.5 / 5.0

BEIJING INSTITUTE OF TECHNOLOGY

Bachelor of Computer Science
Feb - July 2024 | China
Exchange Program
GPA: 4.0 / 5.0

SKILLS

PROGRAMMING

- Python
- C/C++
- Java

TECHNOLOGY

PyTorch • Numpy • Pandas
Transformers • Sklearn • OpenCV
Spark • HIVE • Hadoop
NLTK • ONNX • PostgreSQL
Linux • Docker • LaTeX

ML EXPERIENCE

YOLO • CLIP • EfficientNet
VLM • ViT • MobileNet
Stable Diffusion • GAN • ResNet
BERT • GPT • T5
VLLM •

LINKS

- **Github:** Shintifo
- **LinkedIn:** timofey-brayko
- **Telegram:** Shintifo