Timofey Brayko

ML-Engineer
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SUMMARY

Machine learning engineer with **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

AVISTA | CO-FOUNDER   MAY 2025—PRESENT | STARTUP

https://disk.yandex.ru/client/disk/Avista

Developing an offline automatic license plate recognition system for smart gate control. Successfully deployed a pilot project at Innopolis University's main entrance.

- Fine-tuned **YOLOv11** and **D-Fine** models for vehicle and license plate detection, improving accuracy through semi-supervised learning.
- Expanded training dataset by over 2 million labeled images, boosting detection performance **by 20%**.
- Built full-stack web interface using **Rust (Tokio, Axum, SQLx)** for backend and **JavaScript** for frontend.
- Designed custom **PCB in KiCAD** for edge hardware integration.
- Led technical partner communications from concept to pilot deployment.

ITECH US INC | JUN – JUL 2023

Developed an ML-powered document verification system to detect company stamps and authenticate handwritten signatures

- Fine-tuned **YOLOv7** for precise stamp and signature localization, and **EfficientNet-V2** for signature verification, achieving **87% accuracy** on real-world data.
- Performed comprehensive **EDA**, curated and augmented a proprietary dataset of scanned documents to improve model robustness.
- Integrated trained models into production via **FastAPI**, exposing endpoints through **Swagger UI** for seamless integration.

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.

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
- Rust
- C/C++
- Java
- JavaScript

TECHNOLOGY

PyTorch • Numpy • Pandas
Transformers • PostgreSQL • OpenCV
Spark • Hadoop • Sklearn
tokio • axum • Docker
Linux • KiCAD • 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