Aleksei Kopylov

email | linkedin | github

ABOUT ME

A creative **Machine Learning Engineer** with **2 years of commercial experience** (4 years in ML). **Bachelor of Computer Science**. Like to solve tough problems and create solutions that inspire and amaze other people. Building a **Data Science** fraternity at my Alma mater.

KEY SKILLS

- Develop **Machine Learning** solutions with asynchronous **Python**.
- My main expertise is in **Computer Vision**. I have a solid knowledge of **OpenCV**.
- Train **Deep Learning** models using **HuggingFace**, **TensorFlow**, **PyTorch** and their numerous high level APIs.
- Architect and build resource optimized ML Data Pipelines using **SQL**, **Pandas**, **NumPy**, **DVC**, **Dask** covered with tests.
- Use **MLOps** practices to produce data versioning, experiment reproducibility, orchestration and monitoring system. Have an expirience with **ClearML** and **wandb**.
- Building stable, and extendable software using **Docker** and **Kubernetes**.
- Use **FastAPI** for a rapid inference and early insights.
- **Linux** fanboy. Use it as a main desktop and work environment for years. FOSS enthusiast.
- Aesthetic is everything. Value nicely looking graphs and presentations that people asking to have a link on. Visualize and present data using **TensorBoard**, **Seaborn**, **Ploty**, etc...
- Do initial **researches** for ML|DS teams. Write **documentation** and provide plan how to bring a product from idea to deployment.

CAREER HISTORY

06/2020 --- present
ZeBrains
Machine Learning Engineer (Computer VIsion)

- Developed real time Hand **Pose Estimation** app that uses **Augmented Reality** to fit on rings and bracelets with realistic position and rotation on a hand. I've presented it on several exhibitions. Role: ***Team Lead***.

- My students started careers as machine learning specialists. Created and lectured ML course in the university. Led ML internships. Been invited as an expert and a jury of ML Hackathon.
- Developed a service that extracting and processing information from a complex text on an images (**OCR** + **NLP** + **NER**).
- Created service for **detecting** and **tracking** cars with **License Plate Recognition** (**OCR**).
- Developed **Speech Recognition chatbot**. From collecting and processing data to training a neural network and integrating model to a chatbot. Role: ***Team Lead***.
- Wrote **ETL** pipeline for processing work logs and further analysing.
- Developed Synthetic Image Generator framework.
- Done various **researches** and reports with analysis of the current state of ML. Worked on ML knowledge base.

Tags: Object Detection, Object Recognition, Optical Character Recognition (OCR), Object Segmentation, Image Classification, Image Generation, Pose Estimation, Speech Recognition, Named-entity recognition (NER), Augmented Reality (AR), ETL, Public Lectures, Mentoring, Documentation, MLOps, Research.

Languages: Russian, English
Hobbies: Phylosophy, Weight training, Art, Indie games