

Timofey Beshkurov



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Experience

Computer Vision Developer

Apr 2021 - Present

Ashmanov's neural networks, Moscow

- Development, training and testing of neural networks for computer vision projects
- Data processing and creation of synthetic data sets
- Code assembly work + acceleration. Development of demo stands
- Compilation of documentation and instructions

Python Developer

Aug 2017 - Sep 2018

hoROOMy startup, Moscow

- Parsing websites
- Backend development
- Creation of module for sending messages to verify an account

Skills

- | | | |
|---|-------------------|----------------------|
| • Deep learning (PyTorch, TensorFlow, TensorRT) | • Git | • Java, C++ (1 year) |
| • Machine learning (scikit-learn, pandas) | • Docker | • HTML/CSS/JS |
| • Web (Flask, django, requests) | • Oracle | • CI/CD |
| • Visualization (matplotlib, seaborn) | • MongoDB | • Research |
| • API (FastAPI, Flask-RESTful) | • Linux/Bash | • Educability |
| • Parsing (Beautiful soup, selenium) | • Statistics | |
| • (OpenCV, scipy, numpy, csv/json/yaml, etc) | • Hadoop (basics) | |

Education

- Peoples' Friendship University of Russia (PFUR)
Bachelor, Fundamental Informatics and Information Technology
- College of IT №54
Diploma in Engineering, Information systems and programming

Languages

- Russian - Native
- English - Advanced

Courses

- The Ultimate Hands-On Hadoop | Udemy 2022
- Oracle SQL | Udemy 2021
- Neural networks and computer vision | Samsung Research Russia Open Education 2021

Kaggle courses:

- Intermediate Machine Learning - 2020
- Data Visualization - 2020
- Feature Engineering - 2020

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Software projects

Digital Roads:

- Detection and segmentation of road infrastructure objects.
- Development of additional classifiers for different types of objects.
- Development of algorithms for detection of three types of defects on road signs: graffiti/stickers, fading, and broken integrity.
- Working with data and generating synthetic datasets.
- Model conversion to TensorRT.
- Pipeline build / preparation for production, refactoring + acceleration.
- Docker to build on Ubuntu and Jetson Xavier.
- Creating documentation and instructions
- Communicating with customers

Technologies: yolov5, detectron2, ResNet, PyTorch, TensorRT, Docker

Time series forecasting

- Developing a CLI Pipeline for forecasting.
- Calculation of time series forecasts with variable number of inputs.
- Multi-step ahead forecasting with the ability to adjust predictions.
- Auto-selection and manual adjustment of parameters.

Technologies: darts, sklearn, PyTorch, tensorflow.

Assistant Sign Language Interpreter (Team lead):

- Communicating with customers, developing data collection instructions.
- Analyzing mediapipe outputs, following up on them and generating datasets.
- Development of ML / DL models (CatBoost, SVM, GSN, transformers, beam/ctc/trie decoders).
- Preparing ONNX / CoreML / TF-lite to run on Android and IOS
- Task planning for the team.

Technologies: mediapipe, ST-GCN, onnx, docker, math :)

Demo for face recognition:

- Face detection and face counting.
- Comparing two faces.
- Saving faces and searching for them in a database.
- Development of basic web interface and API.

Technologies: FaceNet, MTCNN/RetinaFace, mongoDB, Annoy, Flask, FastAPI, Docker.

Other projects:

- Traffic monitoring of exams to detect cheaters (HigherHRNet, cv2)
- Style transfer in photos (CycleGan, GANsNRoses)
- Video super resolution (TecoGan)
- Object tracking (DeepSort, cv2)
- Landsat 8 satellite data processing and preparation for markup