

Alexey Belkov

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ABOUT ME

MIPT masters & YSDA student, currently working as Machine Learning Engineer in Medical Computer Vision area

WORK EXPERIENCE

IRA-Labs

Intern ML Engineer

Apr 2022 - Aug 2022

Junior ML Engineer

Sept 2022 - Present

- Deep Learning for CT Image segmentation
- Classic computer vision algorithms (familiarity)
- Participated in research of unsupervised domain adaptation algorithms for medical image segmentation
- Implementing **parallel library** for fast Delaunay triangulation & bilinear interpolation (**Pybind11**, **C++**, **Parlaylib**).

EPAM Systems

Data Science Intern

July 2021 - Dec 2021

Time series analysis via machine learning methods

EDUCATION & PROJECTS

Belarusian State University, Faculty of Applied Mathematics and Computer Science

Bachelor's Degree in Applied Mathematics, 2019 - 2023

Thesis: Modeling social networks with exponential random graphs

Moscow Institute of Physics and Technology,

Master's Degree in Applied Mathematics and Physics, 2023 - 2025

Yandex School of Data Analysis, 2022 - 2024

Passed courses: Deep Vision and Graphics, Natural Language Processing, Machine Learning I & II, Algorithms and Data Structures I, Python, Generative Models (**finished in top-10%**), Applied Statistics, Reinforcement Learning

Educational projects:

- *Generative Models*: Implemented and trained the following models **StarGAN v2**, **Glow: Generative Flow**, **DDPM**, also I'm working on a **project about simulating fluid mechanics and fluid control via generative models**
- *Computer Vision*: **Image segmentation** (U-Net like model), **object detection** (FCOS), **face recognition** (Triplet & ArcFace losses), **unsupervised monocular depth estimation** (DispNet with left-right consistency loss)
- *Natural Language Processing*: **Seq2seq** (language modelling, machine translation) via count-based, **RNN** and **attention** based models, **BERT-like** models fine tuning for **quora question pairs**
- *Python*: Own **Python interpreter**, movie search **asynchronous telegram bot** (IMDb API, **aiohttp**, **aiohttp**)

SKILLS

Python	PyTorch, Numpy, Scipy, Scikit-Learn, Scikit-Image, OpenCV, Pandas, Optuna, CatBoost, XGBoost, FastAPI
Relevant mathematics	Linear Algebra, Calculus, Probability and Statistics, Linear and Convex Optimisation

LANGUAGES

Russian	native
English	B2