Dmitry Shabat
Machine Learning Engineer

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I have a website!
xallt.github.io

Machine Learning Engineer with experience in processing big 2D/3D data and passion for state-of-the-art 3D reconstruction / text-to-3D algorithms
I love diving into tough Computer Vision-related problems, and am looking for a team where I can contribute my skills, and learn!

Experience

ML Research Engineer, Gracia AI
03/2024 - Present
- Overlooking the pipeline for static scene reconstruction using 3D Gaussian Splatting
- Implemented various post-processing steps to eliminate common post-training 3DGS artifacts
- Integrating ideas from SOTA research for quality improvements & runtime/training optimizations

ML Engineer, Clostra
04/2022 - 03/2024
- Reproduced variations of the NeRF architecture for 3D reconstruction of static/dynamic scenes & full-body / head avatars, constantly keeping up with SOTA research
- Implemented various approaches using GANs / Diffusion models for 3D generation / generative fill in 3D reconstruction
- Integrated segmentation / detection / depth estimation models to improve 3D priors
- Rapid MVPs development for various LLM / Object Detection / Re-ID / Image Generation tasks

ML Engineer, 3D Predict
07/2020 - 04/2022
- Sped up teeth segmentation **~3x** by optimizing the model architecture
- Improved teeth segmentation accuracy, leading to **2x** manual revision speed by clinical experts
- Developed internal MLOps system based on **ClearML** for training & deploying models
- Implemented & deployed a model used for estimating the transformation of a tooth in a CT scan

Software Developer Intern, Socinform
12/2019 - 04/2020

Engineered and implemented fast fuzzy-search over a large database of brand names in **.NET**

Game Developer Intern, FunExpected
06/2018 - 08/2018

Implemented a game in **Godot-Engine** that teaches kids basic concepts of algorithms.
One of educational games in **Funexpected Math**

Education

Bachelor of Science: Applied Mathematics and Informatics
09/2019 - 06/2024
Higher School of Economics - Moscow, Russia
Graduation date - 06/2024

Skills

- **Languages** - Python, C++, CUDA, Scala, Javasript
- **ML & CV** - PyTorch(3D), OpenCV, ClearML, Slurm, Spark, Hadoop
- **Computer Graphics** - OpenGL, Dear ImGui, Unity, Godot Engine
- **Tools** - Git, CMake, Docker, Bazel, Github CI

Languages

Russian – Native Speaker
English – Fluent

Interests

- **Sport** - Ping Pong / Voleyball / Rock Climbing / Skiing
- **Productivity** - obsessing over Obsidian as a Second Brain
- **Lecturing** - occasional lectures on my favorite tech topics. Link to recordings

Projects

Procedural noise texture generator (Three.js, React) – link
Mediapipe Hand Tracking in C++ / Python – link
OpenGL Ray Tracer (C++) - link