

# Dmitry Shabat

Machine Learning Engineer

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Bat Yam, Israel

Machine Learning Engineer proficient in rapid R&D: integrating state-of-the-art methods into production-ready solutions. Experienced in processing big 2D/3D data, and with passion for efficient, elegant solutions to problems in Computer Vision. Looking for a team where I could work on tough problems!

## Experience

### ML Research Engineer, Gracia AI

03/2024 - Present

*AI + VR startup, \$1.2m seed funding*

- Implemented Level-of-Detail (LoD) for neural scenes, allowing **>10x larger** 3D scenes
- Shipped **1.5x FPS** improvements for scenes on **edge devices**
- Optimized algorithms by implementing them in **CUDA**
- Implemented in-house **MLOps** automations for experiment running & evaluation
- Rapid **R&D**: implementing ideas from state-of-the-art research, evaluation, reporting to the team

### ML Engineer, Clostra

04/2022 - 03/2024

*AI Research Company, partnerships with US Department of Defense & Navy*

- Integrated **GANs / Diffusion Models** for 3D generative fill, thus **requiring 5x less data**
- Implemented 3D reconstruction of **full-body / head avatars** using state-of-the-art research
- Integrated **segmentation / object detection / depth estimation** models to improve 3D priors

### ML Engineer, 3D Predict

07/2020 - 04/2022

*MedTech, Top 100 DHNY startups, featured in Forbes*

- **Sped up inference 3x** by optimizing the Neural Network architecture
- Improved segmentation accuracy, leading to **2x revision speed** by clinical experts
- Developed internal **MLOps** system based on **ClearML** for training & deploying models
- Engineered datasets & shipped models estimating various attributes of teeth from CT scans

### Software Developer Intern, Socinform

12/2019 - 04/2020

Implemented system for fast fuzzy-search over a large database of brand names in **.NET**

### Game Developer Intern, FunExpected

06/2018 - 08/2018

Made a game in **Godot-Engine** that teaches kids basic concepts of algorithms.

One of the educational mini-games in **Funexpected Math**

## Education

### Bachelor of Science: Applied Mathematics and Informatics

Higher School of Economics - Moscow, Russia

*Graduation date - 06/2024*

## Skills

- **Languages** - Python, C++, CUDA, Scala, Javascript
- **ML & CV** - PyTorch(3D), OpenCV, ClearML, Slurm, Spark, Hadoop
- **Computer Graphics** - OpenGL, ImGui, Unity, Godot Engine, Blender
- **Tools** - Git, CMake, Docker, Bazel, Github CI
- **Soft skills** - patient, open to discussing ideas with colleagues

## Projects

Procedural noise texture generator (Three.js, React) – [link](#)

Mediapipe Hand Tracking in C++ / Python – [link](#)

OpenGL Ray Tracer (C++) - [link](#)

## Languages

English – Fluent

Hebrew – Aleph+

Russian – Native Speaker

## Interests

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