

# Dmitry Shabat

Machine Learning Engineer

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I have a website!

[xallt.github.io](https://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 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

- Increased teeth segmentation  $\sim 3x$  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 (**The Webby Awards 2020 People's**

**Voice Winner for Best Visual Design**)

## Education

### Bachelor of Science: Applied Mathematics and Informatics

09/2019 - 06/2024

Higher School of Economics - Moscow, Russia

Graduation date - 06/2024

## Projects

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

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

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

## Skills

- **Languages** - Python, C++, CUDA, Scala, Javascript
- **ML & CV** - pytorch(3d), scipy, opencv, ClearML, Slurm, opencv
- **3D App Development** - OpenGL, Dear ImGui, Unity, Godot Engine
- **Software Engineering** - git, bash, cmake, docker, bazel, github CI

## Languages

Russian – Native Speaker

English – Fluent

## Interests

- **Cooking** - crepe master 🍳
- **VR Gaming** - Beat Saber 🗡️ mostly!
- **Sport** - Ping Pong / Volleyball / Rock Climbing / Skiing
- **Productivity** - obsessing over Obsidian as a Second Brain
- **Lecturing** - occasional lectures on my favorite tech topics. [Link to recordings](#)