

# Dmitry Shabat

Machine Learning Engineer

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<https://github.com/Xallt>

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Programming languages:

- Python
- C++

Machine Learning Engineer with experience in processing large arrays of 3D data and passion for state-of-the-art 3D reconstruction / text-to-3D algorithms

## Experience

### ML Researcher, Clostra

04/2022 - Current

- Worked very closely with different variations of the NeRF architecture for 3D reconstruction of static/dynamic scenes & full-body / head avatars
- Worked with state-of-the-art approaches in monocular/multi-view depth-estimation & 3D-reconstruction
- Implemented various approaches using GANs / Diffusion models for 3D generation / reconstruction

### ML Engineer, 3D Smile

07/2020 - 04/2022

- Increased teeth segmentation speed by about **3 times** by optimizing the model architecture
- Improved teeth segmentation accuracy which led to **2x** manual revision speed by clinical experts
- Developed internal MLOps system
- 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 - 06/2023

Higher School of Economics - Moscow, Russia

Graduation date - 06/2023

## Projects

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

Integration of Mediapipe into C++ / Python – [link](#)

Mathematical expression generator (Python) – [link](#)

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

## Stack

- PyTorch/Tensorflow
- ClearML
- OpenGL
- Unity3D
- CMake
- OpenCV
- Linux CLI
- Git
- numpy, sklearn, pandas, scipy
- CUDA
- Bazel
- Dear ImGui

## Languages

Russian – Native Speaker

English – Fluent

## Interests

Computer Vision

Computer Graphics

3D Reconstruction

AR/VR

MLOps