

# Anton Vasin

**Homepage/portfolio:** <https://vasin.space>

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## Master of Science in Software Engineering

Senior Programmer at [Playrix](#)

### Technical proficiencies

Highly proficient in Modern C++.

Expert in CUDA C++, OpenGL, Apple Core Image, Java Native Interface, and WebRTC.

Experienced in Unity, C#, NodeJS, and FFMPEG.

### Languages

Russian: Native

English: Advanced

### Professional experience

**Playrix** - Remote

<https://playrix.com/>

**Senior Programmer**

Sept/2023 -

Present

**Technologies:** C++17, Boost C++ Libraries, OpenGL ES 3.0, GLSL

#### Scope of my work:

- Designing the architecture of the game engine rendering system.
- Development of the image processing algorithms and shader programs.
- Designing and development of unit tests and automated tests.
- Porting the games based on the game engine to mobile (iOS, Android) and desktop (Windows, MacOS) platforms.
- Maintaining the game engine code base. Bug fixes, performance, and memory consumption optimizations.

**Prequel Inc** - Remote

<https://www.prequel.app/>

**Lead Graphics Engineer**

May/2021 -

Aug/2023

**Technologies:** C++17, Boost C++ Libraries, OpenGL ES 3.0, GLSL, Metal, Apple Core Image, Directed Acyclic Graphs (DAG), Java Native Interface, Swift.

I was the lead developer of a state-of-the-art cross-platform image processing engine for photo and video editing software.

#### Key Achievements:

- I designed the engine architecture from scratch.
- I developed an efficient shader graph compiler.
- I implemented more than 300 image-processing filters & shaders.
- I built an efficient color management subsystem.
- I implemented Java Native Interface layers for the Android platform.
- I also implemented Swift layers for iOS & MacOS platforms.

**Topcon Positioning Systems** - Moscow, Russia

<https://www.topconpositioning.com/>

**Lead Software Engineer**

Jun/2019 -

May/2021

**Technologies:** C++17, Qt, OpenGL ES 3.0, DirectX 11.

I worked on the in-house 3D engine for various mobile and desktop geodetic & survey CAD products.

**Key Achievements:**

- I completely overhauled the legacy part by fixing dozens of deadlocks, data races, and race-condition-induced crashes.
- I improved the concurrency model by replacing constantly conflicting mutexes with [the Event Loop approach](#).
- I significantly optimized battery consumption on autonomous geodetic and mobile devices by significantly optimizing rendering algorithms.
- I designed and developed a new renderer based on Entity-Component-System architecture (ECS). The ECS approach improved rendering performance and decreased application response time on autonomous and mobile devices.

**Competentum Group (EPAM subsidiary)** - Moscow, Russia

<https://competentum.ru/>

<https://www.epam-group.ru/e-learning>

**Senior Software Developer**

Nov/2015 -  
May/2019

**Technologies:** C++11, C#, Unity, FFMPEG, WebRTC, Node.JS, Kurento, Docker Compose, AWS EC2, AWS S3.

I successfully finished several E-Learning web projects. The most significant was a project for [Mursion, Inc.](#) I was a lead of a team of three developers.

**Key Achievements:**

- I integrated the WebRTC C++ library as a peer-to-peer network system into a Unity-based game.
- I integrated the FFMPEG C library as a game video-capturing system into the game.
- I developed a game character facial animation control system based on webcam facial recognition.
- I successfully made ports of the application for Android, iOS, OSX, and Oculus Go VR Headset.

**NANO Security** - Bryansk, Russia

<https://www.nanoav.pro/>

**Middle Software Developer**

Jul/2013 -  
Jun/2015

**Technologies:** C++03, Boost, Microsoft COM, WinAPI, IDA Disassembler.

I started my career as a C++ developer here.

**Key Achievements:**

- I developed several static malware analysis modules.
- I developed various data extractors from compressed archives, file system images, installation packages, game engine bundles, etc.
- I performed reverse engineering and manual analysis of Android and Java malware.

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**Education**

Master of Science in Software Engineering, [Bryansk State Technical University](#)