

Anton Vasin

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Master of Science in Software Engineering

Senior Graphics Engineer at [Prequel App](#)

Technical proficiencies

Highly proficient in C++.
Expert in CUDA C++, OpenGL, WebRTC (both C++ and JS).
Experienced in Unity, C#, NodeJS, FFMPEG.

Languages

Russian: Native.
English: Upper-Intermediate/Advanced.

Professional experience

Prequel App

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

Senior Graphics Engineer

May/2021 - present

Technologies: C++17, OpenGL ES 3.0, OpenGL Compute Shaders, GPGPU, Apple Core Image, WebGL, Three.JS

I design and develop a new image and video processing engine for mobile devices. The goal is to achieve the best performance making it utilize both CPU and GPU resources efficiently.

Topcon Positioning Systems - Moscow, Russia

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

Senior Software Engineer

Jun/2019 - May/2021

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

I worked on the company's 3D visualization subsystem for various mobile and desktop geodetic products.

Key Achievements:

- I revised and successfully redesigned the concurrency model of the 3D visualization subsystem. I replaced the mutex-oriented approach with the event-loop one. By this, I completely eliminated dozens of race conditions (missed locks) and deadlocks (cross-reference locks). Event-loop deferred calls and task prioritization significantly reduced battery consumption on autonomous geodetic and mobile devices.
- I designed and developed a new renderer based on Entity-Component-System architecture. 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 before getting promoted up to a tech-lead for a new Unity-based project owned by [Mursion, Inc.](#) As a tech-lead, I supervised a team of three developers.

Key Achievements:

- Developed a WebRTC-based network subsystem in the form of [Unity Components](#).
- Developed an FFMPEG-based game session recording component.
- Developed a game session streaming cloud service based on WebRTC, Kurento, and NodeJS.
- Developed a real-time facial capturing and animation system for Unity characters based on [OpenFace library by Tadas Baltrusaitis](#).
- Successfully ported the application on Android, iOS, OSX, and Oculus Go VR Headset.
- Developed real-time spatial audio module for VR Environment.

1xBet - Bryansk, Russia

<https://1xstavka.ru/>

Middle Software Developer

Jul/2015 -
Oct/2015

Technologies: C++11, C#, WCF, MongoDB, MySQL.

Key Achievements:

- Developed an anti-cheat system that detected anomalies and bursts in raw data logs (unstructured documents in MongoDB collections).
- Developed several statistical and combinatorial models predicting sport game results in real-time.

NANO Security - Bryansk, Russia

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

Junior Software Developer

Jul/2013 -
Jun/2015

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

Key Achievements:

- Developed several static malware analyzers.
- Developed several static and dynamic feature detectors for further AI analysis.

- Developed container extractors to avoid third-party software license issues: archives, file system images, installation packages, game engine bundles, etc.
- Implemented compression and decompression algorithms and stream encoders to avoid third-party software license issues.
- Added improvements to CPU x86/x64 emulator.
- Added improvements to JavaScript emulator.
- Performed reverse engineering and manual analysis of Android and Java malware.

Education

Master of Science in Software Engineering,
Bryansk State Technical University
<http://iipo.tu-bryansk.ru/>