

Alexander Potapov

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PROFESSIONAL SUMMARY

Software Engineer with 3 years of experience in software development of realtime graphics applications, both in 2D and in 3D. Have strong skills in low-level graphics programming in most APIs, including Vulkan, DirectX and OpenGL. During the last year working closely as a 2D graphics engineer with a Frontend and UI/UX team at a startup, developing next-generation spreadsheet software. During the course of my work, I led the development of many features in rendering that became major components of the product.

PROFESSIONAL EXPERIENCE

Frontend Software Engineer

May 2022 - Now

The Bricks Inc

At Bricks we are creating a next-generation spreadsheet software

- Built and maintained a spreadsheet renderer which became the foundation of the spreadsheet web application
- Launched Tables, Charts and Filtering features, that made the product stand out from the competition
- Worked closely with UI/UX team to make product visually appealing, which was highly appreciated by our users

C++ 3D Graphics Engineer

August 2021 - May 2022

Eagle Dynamics

Digital Combat Simulator World (DCS World) - Flight simulation video game

- Built a new Vulkan rendering backend for the game's engine, speeding up the average framerate by 15-20%
- Created a cross-compiler shader pipeline into SPIR-V format to allow usage of FX shaders in a Vulkan renderer
- Moved graphics code to render graph architecture, reducing game memory consumption by ~10%

C++ Software Engineer

October 2020 - June 2021

Nanosemantics Lab

Chatbots for business

- Migrated the language parser to a new framework increasing parsing time by 2-3x, making overall application up to 50% faster for the user
- Launched multiple features in language processing that allowed product team to implement much more precise commands for the chat bots

EDUCATION

Higher School of Economics University

2020-2024

Bachelor's degree

- Software Engineering

OPEN-SOURCE PROJECTS

- [MxEngine](#) (900+ stars) - 3D game engine (deferred rendering, PBR, physics, audio, editor tools, serialization)
- [VAL](#) (70+ stars) - Render Graph-based Vulkan rendering library (automatic barriers, shader reflection)
- [Graphics-Developer-Roadmap](#) (500+ stars) - collection of links to educational materials for graphics programming (maintainer)

SKILLS

3D Graphics (Vulkan, DirectX, OpenGL, Render Graph, C++), Frontend (React, TypeScript, WebGL, WebAssembly), Collaboration (Jira, Figma, Git, GitHub), Startups