Alex Hajdu

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Summary

Experienced software engineer specializing in Unreal Engine 5 (UE5) and Unreal Engine 4 (UE4) with a focus on C++, tooling, and core systems. Builds editor plugins, modifies engine source, and designs scalable architectures for games and XR applications. Strong emphasis on performance optimization, test automation, and developer productivity. Collaborates effectively across engineering, QA, design, and art to deliver reliable, maintainable solutions.

Core Skills

- Engines and Platforms: Unreal Engine 5 (UE5), Unreal Engine 4 (UE4), Unity, VR/AR/MR, Hololens 2, Windows Mixed Reality, nDisplay
- Languages and Scripting: C++, C#, Objective C, Blueprint, Python, Lua, PowerShell
- Tools and Systems: Editor plugins, Engine source modifications, Slate, UMG, PlayFab, gRPC, Azure, Qt, Dear ImGui, CMake, Premake
- Testing and Automation: Gauntlet Automation Framework, Google Test
- Performance and Profiling: CPU and GPU optimization, packaging, asset management
- Source Control and Workflow: Git, Perforce, SVN, Agile, Jira, Asana, Wrike
- Rendering and Audio: Lighting, Particles, Postprocessing, Sequencer, FMOD
- IDEs and Utilities: Visual Studio, Xcode, CLion, Qt, Rider, Postman

Professional Experience

Senior C++ Unreal Engine Developer, PortalOne (Contract, b2b) — Sep 2022 - Nov 2025

- Implemented C++ systems and Blueprint modules for a hybrid games platform.
- Modified Unreal Engine source to support project-specific requirements.

- Built editor plugins and internal tools to accelerate developer workflows.
- Created an in-app purchases plugin enabling monetization on iOS and Android.
- Defined software architecture across modules; performed code reviews.
- Drove performance optimization across CPU and GPU hot paths.
- Integrated services and tooling including PlayFab, gRPC, and Azure.
- Established and maintained automated testing with the Gauntlet Automation Framework.
- Provided non-technical support, QA collaboration, and art pipeline assistance.

Software Engineer (C++), Happy Finish / Microsoft — Apr 2021 - Jul 2021

- Developed Service Manager UX as an Unreal Engine editor tool (UE4) in C++.
- Built runtime Platform UX using UX Tools and integrated with Microsoft Mesh.
- Implemented communication layer between editor tooling, runtime, and Mesh services.
- Collaborated closely with Microsoft engineers; conducted code reviews.
- Technologies: C++, UE4, Hololens 2, PowerShell, Git.

Software Engineer (C++), Dark Slope Studios (Contract, b2b) — Dec 2020 - Present

- Delivered C++ features for XR applications with focus on systems reliability.
- Researched and implemented runtime full-body pose recording in VR.
- Leveraged Gauntlet Automation Framework and PowerShell to support automated workflows.
- Tools: C++, UE testing, Git, Perforce.

Software Engineer (C++), Geodesic Games / Epic Games — Sep 2020 - Nov 2020

- Contributed C++ features and consultancy for nDisplay and Previz projects.
- Integrated libMVRgdt into existing codebases and supported test coverage.
- Tools: Google Test, Unreal Engine testing suite, Git, Perforce.

Software Engineer (C++), Chaos Group — Jun 2019 - Jun 2020

- Implemented Corona Renderer integration for ARCHICAD, progressing from alpha toward commercial readiness.
- Integrated features from renderer core; delivered daily builds and conducted code reviews.
- Collaborated with the ARCHICAD community; provided support for the plugin.
- Tools: C++, Python, Lua, Premake, CMake, Google Test, Git.

Selected Earlier Experience (2015 – 2019)

- CTO, WeMakeGames — Aug 2017 - Mar 2019
  Led team for Castle Heroes (iOS/Android); owned architecture, gameplay, networking, and optimization. Managed planning, reviews, mentoring, and project delivery. Tech: Unreal Engine, C++, Git/SVN.
- Senior Unity/Unreal/XR Developer, Inloopx by AVAST — Dec 2015 - Jul 2017
  Built AR/VR prototypes and apps for clients including Skoda, Mercedes Daimler, Sygic, Nestle, Slovak Telekom, Samsung, and OPEC. Supported presales estimates, interviews, and client communication. Tech: Unity, UE, C++, C#, Objective C, Git/SVN, Hololens, Gear VR, HTC Vive.
- Software Engineer (C++/UE), AEG and Electrolux — Dec 2017 - Feb 2018
  Maintained and enhanced VR interactive presentations; implemented interactions and movement systems. Tech: Unreal Engine, C++/Blueprints, SVN, VR, Windows Mixed Reality.
- Software Engineer (C++/UE), Cellense/Exponea — Sep 2018 - Dec 2018
  Built Unreal Engine plugin integrating analytics SDK (C++/Blueprints). Tech: UE, C++, Git.
- Software Engineer (C# Unity), EA Chillingo / AboutFun — May 2015 - Dec 2015
  Shipped GUI features and backend tasks for WarFriends (iOS/Android). Tech: Unity, C#.
- Founder and Software Engineer, Mr.Fox and friends — Jan 2017 - Feb 2018
  Created AmblyoVR (VR therapy app); implemented VR environment, treatment activities, and stereo rendering. Built websocket-driven dashboard customization; optimized PC and mobile builds.
- Independent Plugins (Unreal Engine)
  Fix This! (UE4 editor plugin): Project management integration with Trello, Assembla, Jira.
  Whats My Public IP (UE plugin): Utility to fetch public IP.

Education

University of Transport and Communications — Faculty of Applied Mathematics and Informatics

Community and Leadership

Founder and organizer, Unreal Engine User Group Slovakia (#unrealUGSK)

- Run regular meetups; active community with 100+ Discord members.