

Konstantin Churakov

Senior Unity Developer · Software Architect

Email: vertoker@gmail.com Telegram: t.me/vertoker GitHub: github.com/vertoker YouTube: youtube.com/@vertoker
Website: vertoker.net Location: Yekaterinburg, Russia

Summary

I'm a Unity developer from Yekaterinburg, working commercially since 2022. What I do is system design: I split large projects into independent modules, define the data model and write the tools and tests a whole team builds on. I work with AI agents deliberately: in my current project Claude, Codex and Perplexity work in parallel, and in my own SDK Claude wrote about 2000 tests. My own product is Bullet Hero, a rhythm game built as an engine for its genre

Skills

System design and architecture: System design, Software architecture, OOP, Design patterns, Dependency Injection (DI), VContainer, Zenject, MVC / MVP / MVVM, Reactive programming (R3, UniRx), UniTask, Roslyn Source Generators, Unit testing (NUnit)

AI-assisted development: AI-assisted development, Agentic workflows, Claude Code, Codex, Perplexity

Unity and performance: Unity (Unity3D), DOTs, Entity Component System (ECS), Burst, Jobs, Addressables, UI Toolkit, URP, Shaders, IL2CPP, Unity Profiler, Optimization

Multiplayer and backend: Multiplayer, Mirror, Lidgren, SignalR, BestHTTP, ASP.NET, Steamworks, Firebase

Tools and process: Git, Gitflow, GitLab, TeamCity (CI), Docker, Linux, Xcode, CMake, Code review, Agile / Scrum

Programming languages: C#, C++, Python, Zig

XR: VR, OpenXR, SteamVR, Pico 4, Oculus Quest 2 / 3, HTC Vive Pro

Work Experience

Unity Developer / Team Lead

Relocate Team | Aug 2026 - Present | A team built around one investor to make his "dream game"

- Set up the Unity project for agentic AI development (Claude Code, Codex, Perplexity) with several agents working in parallel
- Developed enemy AI on Goal-Oriented Action Planning (GOAP): designed and tuned behaviour chains to match the spec and the real gameplay
- Revised the game design document (GDD) with the game designer to align new features with the technical state of the project

Tech: Unity, C#, GOAP, VContainer, Claude Code, Codex, Perplexity

Senior Unity Developer / Team Lead

AppFox | Aug 2025 - Jun 2026 | Apps and games made to order. The main project was a mobile multiplayer shooter in the spirit of Tarkov

- Led a team of up to 5 Unity developers: requirements analysis, estimates, weekly Scrum sprint planning, task assignment and mentoring on architecture
- Split the client into 20+ assembly definition (asmdef) modules with VContainer dependency injection (DI) and a custom recursive build: IL2CPP builds about 30% faster
- Wrote a custom Addressables packer that made dedicated server builds 3x smaller
- Optimised server-side NPCs (physics, AI, NavMesh): server TPS up by 40%
- Built the multiplayer on Mirror with room management over SignalR and backend API calls through BestHTTP, deployed game servers in Docker
- Integrated Firebase (authentication, analytics), Unity IAP and RuStore API payments, made iOS builds in Xcode
- Wrote 200+ NUnit unit tests for critical code, set up CI builds in TeamCity on the company GitLab

Tech: Unity, C#, Mirror, SignalR, BestHTTP, VContainer, UniRx, Addressables, IL2CPP, Firebase, Unity IAP, Docker, TeamCity, Xcode, NUnit

Senior Unity Developer / Lead Architect

Novatrans | Jan 2022 - Aug 2025 | Training simulators, mostly VR on railway topics. Unity Developer until 2024, then Senior Unity Developer and lead architect

- Designed the architecture of all company projects as lead architect: co-wrote 3 internal Unity packages in a month, every later project was built on them
- Built the networked open world of Virtual Station on Lidgren and Addressables with an auto-generated scene split: about 1.5 km² and 20k+ objects
- Developed the ASP.NET backend, the multiplayer servers, part of the React frontend and a voice chat from scratch (Opus codec built with CMake, raw Lidgren sockets)
- Built a visual scenario editor (UI Toolkit, Graph Toolkit) on Zenject SignalBus with Mirror multiplayer, its own ECS and versioning: 3 - 4 weeks saved on a typical project
- Developed VR apps on OpenXR and SteamVR for Pico 4, Oculus Quest and HTC Vive Pro, with a networked IK avatar
- Led teams of up to 4 people, ran the company GitLab with Gitflow, coding standards, code review, releases and documentation
- Introduced unit testing with 50 - 60 NUnit tests and wrote 100+ Unity Editor tools

Tech: Unity, C#, Zenject, Mirror, Lidgren, Addressables, UI Toolkit, Graph Toolkit, OpenXR, SteamVR, BNG VR Framework, ASP.NET, React, Opus, Docker, NUnit, GitLab

Projects

Bullet Hero (2026) - My own product: a rhythm bullet hell where players make and play levels, built as an engine for the genre. The DOTs core draws 5k objects on phones and 100k at 60 fps on PC. The level format lives in an open C# SDK with 2 Roslyn source generators, and its binary codec loads a 19k-object level in 203 ms instead of 10 s. 5 platforms and 6 stores from one build list

Education

A. S. Popov Ural Radio Engineering College - Information Systems Technician, 2023

Languages

Russian - native, English - B2