

# TREZUBOV KIRILL

## GAMEPLAY PROGRAMMER

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[🌐 My portfolio Website](#)

### SUMMARY

A highly motivated video game programmer with 6+ years of experience in C++ and 2+ years in Unreal Engine, along with a deep understanding of algorithms, mathematics, system architecture design, and collaborative teamwork. I am passionate about creating engaging and innovative gameplay mechanics.

### SKILLS

- C++
- Unreal Engine
- Gameplay Ability System (GAS)
- AI Systems: EQS, Behavior Tree Design
- Multiplayer programming
- Multithreading programming
- 3D Math
- Optimization, Debugging, Profiling
- Perforce, Git

### EXPERIENCE

#### Gameplay Programmer – C++ / Unreal Engine

Fireteam Interactive – 06.2024 – Present

StrikeNet – Published title in Steam. Multiplayer shooter

- Implemented the Server-Side Rewind (SSR) algorithm using the server's frame history, enabling lag compensation for all clients
- Developed a Multiplayer Session plugin using Steam and Unreal's subsystem, which can be integrated into any project
- Optimized CPU performance with algorithm improvements and caching, stabilizing the frame rate above 60. Enhanced memory allocations using a Pool of objects
- Implemented damage and fire logic, bullet spread for each of the seven weapon types and grenades (hit scan & projectile-based)
- Designed and implemented a Combat System using GAS : health, buffs, fire, ammo management, damage multipliers, weapon inventory system
- Implemented game statistics using Game State, Player States, tracking score, deaths, and overall points based on match type: Deathmatch, Teams, Capture the Flag (CTF)
- Created an Inverse Kinematics algorithm for realistic walking character animations
- Developed Round Sessions, ensuring synchronization between clients and the server using timestamps with RPC

#### Gameplay Programmer – C++ / Unreal Engine

Freelance (Part time) – 09.2023 – Present

Working as an independent game developer on my personal and outsourced projects. View my [portfolio](#)

Shoot Them Up – AI shooter

- Implemented a fully functional enemy AI using EQS and Behavior Trees
- Created a spectator mode utilizing Unreal Engine's Spectator Pawn
- Developed weapon bullet spread and impact marks using decals
- Built a leaderboard using Game State, Player States to record and manage player performance and rankings

Souls & Treasures – RPG open world

- Implemented a Combat System including health, stamina, dodging, and attack mechanics
- Created weapon logic for carrying and attacking with five weapon types (one-handed & two-handed)
- Developed enemy targeting system using Motion Warping Component.
- Implemented logic for spawning and collecting souls & treasures
- Created destructible objects using Fracture Uniform and Voronoi mode in Unreal Engine

#### Senior C++ Software Engineer

Freelbee – 07.2022 – 06.2024 – An international payment platform facilitating interactions between companies and freelancers

- Designed and built a system to handle 10,000 CCU, integrating with AWS by applying multi-stack expertise in C++, Java, and Node.js, enabling seamless integration with Amazon S3
- Implemented a backup system using C++ and Bash scripting, enabling fast user database recovery from a disaster within two minutes
- Automated 100% company's document workflow using Mustache templates, minimizing manual effort and enabling critical document generation in a few seconds
- Set up a comprehensive logging and monitoring system with Grafana, Loki, and Prometheus, providing proactive issue detection

#### Middle C++ Software Engineer

Wono – 10.2020 – 07.2022 – A payment platform facilitating interactions between companies and freelancers

- Rewrote the entire system from PHP to C++17 which ultimately increased overall system performance by 25%
- Integrated 4 high-load payment gateway APIs using C++, CppRest, enabling freelancers to use diverse payment methods and driving a 3x increase in company revenue
- Integrated with the Sumsb API using C++ and CppRest, ensuring that only verified users can access the platform
- Built a custom profiler in C++ using the Chrome Trace format, leveraging cross-platform expertise, enabling advanced system diagnostics on Windows, Linux, and macOS for the entire team

#### Junior C++ Software Engineer

Wono – 07.2019 – 10.2020 – A materials tracking and management system for the construction industry

- Built the entire system from scratch using C++17
- Automated 100% of the company's document workflow using C++, PostgreSQL, Mustache Templates enabling the generation of critical documents within a few seconds
- Implemented unit and integration testing using CppUnit, GoogleMock, achieving 100% software coverage and reducing production defects

### EDUCATION

#### Master's degree / Software engineering

ITMO University

### ACHIEVEMENTS

- **Chili Code Jam 2024.** [4th place](#) finish of 70. A whole weak game jam (December 22 – 29). The team consisted of 5 people and the game was developed on Unreal Engine 5. My role was a gameplay programmer, making me responsible for gameplay mechanics. [The result](#)
- 1 shipped title in Steam, up to 7 high quality games. Discover [best](#)
- 4 published [articles](#)

### LANGUAGES

- English: C1
- Russian: native

### HOBBIES AND INTERESTS

- Volunteering: Student's buddy ~1 year / Education Mentor ~1 year
- Teaching : University ~2 years (software development) / Schoolchildren ~4 years (programming languages)
- Team building activities (game jams)
- Sport: gym workouts, regular running