




Jacob Fernandez

Gameplay Programmer | Software Engineer

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SKILLS

- **Programming:** C++, Python, C#, JavaScript, TypeScript, HTML/CSS
- **Frameworks & Libraries:** Unreal Engine 5, Unity, Next.js, PyQt6, OpenGL, Crow (C++ REST)
- **Development Tools:** Git, Perforce, Visual Studio, VS Code, Rider, RenderDoc
- **Technical Expertise:** Systems Programming, Object-Oriented Programming, Data Structures & Algorithms, REST API Development, Performance Optimization, Multithreading, Software Design Patterns, Database Systems, Gameplay Programming, UI Development

EDUCATION

University of the Incarnate Word || San Antonio, Texas 2024 – 2026

M.F.A. Game Programming

Expected 2026

- **Won "Triple A Programmer" Award • 2024**

Relevant Coursework: Advanced C++ Programming, C# Programming, Unity, Unreal Engine 5 Development, Systems Architecture, Gameplay Programming, AI Systems, Performance Optimization, Object Orient Programming, Web development.

University of the Incarnate Word || San Antonio, Texas

2021 – 2024

B.F.A. Game Programming, Minor: Computer Interactive Systems

Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming, Computer Graphics, Game Engine Architecture, Software Engineering, Database Systems

EXPERIENCE

University of the Incarnate Word: Game Programming TA

9/2025 – 7/2026

- Teach advanced C++ and Unreal Engine 5 to students transitioning from C#/Unity, focusing on systems programming, memory management, and design patterns
- Develop comprehensive curriculum including PowerPoint presentations, coding labs, and project specifications covering pointers, file I/O, and gameplay systems
- Mentor students on debugging techniques, code review practices, and professional software development workflows
- Guide students through complex implementations including AI behavior trees, movement systems, and Gameplay Ability System architecture

University of the Incarnate Word: UPGRADE Program

2022 – 2025

- Demonstrate real-world applications of C++, C#, Unreal Engine, Unity and game development workflows to prospective students

Graduate Prototyping: MFA Program

2024 – 2026

- Developed OpenGL graphics engine in collaborative setting, implementing rendering pipeline and shader systems
- Currently developing turn-based horror game for Summer 2026 semester, focusing on gameplay systems and technical design
- Completed hero-based prototype demonstrating full development cycle from concept to playable prototype

Projects

[CS2 Skin API](#) | C++, Crow, libcurl, nlohmann/json

- C++ REST API consuming live CS2 market data; implemented knapsack DP algorithm to optimize budget selections.

Turn-Based Horror Game (In Development) | C++, Unreal Engine 5, Blueprint

- Working with a team, to create a turn-based horror game in Unreal Engine 5.6. I am responsible for gameplay mechanics.