

Manoel McCadden

Software Engineer and Audio Programmer

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SKILLS

Programming Languages: C/C++, Javascript; Familiar with C#, Assembly, Java, Lua, GLSL, R

CS Topics: Data Structures, Algorithms, Operating Systems, Computer Architecture, Interactive Sound Synthesis

Graphics and Libraries: FMOD, Dear ImGUI, JSON for Modern C++, GLM, GLFW; Familiar with Vulkan

Tools and Environments: C++ Custom Engine, Trello, Git/Github, Visual Studio, VS Code, NeoVim, FL Studio, Reaper

Coding Practices: Code Reviews, Pair Programming, Unit Testing, Doxygen/Code Documentation, Technical Writing

Audio Engineering: Mixing, Vocal Recording, Instrument Recording, Live Event Setup/Teardown, Studio Setup

Project Skills: OpenGL, Shaders, Art and Audio Pipeline Development, Physics and Collisions, Serialization

WORK EXPERIENCE

Game Project TA/Mentor

Redmond, WA

DigiPen GAM-200/250

Sep 2025 - Present

- Supporting 17 tech teams, with 3-to-6 members each, in audio, graphics, physics, serialization, and engine architecture as they develop an original game in a custom C/C++ game engine
- Providing direct mentorship for one of the custom engine tech teams through in-person and online support and guidance

Sound Lab Assistant

Redmond, WA

DigiPen Sound Lab

Sep 2024 - Present

- Assisting in the setup, teardown, and mixing of 10+ live audio events, including concerts and public speakers, while always ensuring a high-quality listening experience.
- Managing mixing and recording for 5+ studio sessions between musicians and voice actors in a professional-grade studio

Data Analytics/Music and Sound Design TA

Redmond, WA

DigiPen WANIC

Summer '23, '24, & '25

- Worked with a team of TAs to develop and deliver a new program to 70+ high school students, which introduced them to topics in data analytics such as plotting, research, and analysis through R and Excel
- Mentored 15 students of varying skill levels by managing attendance daily, grading weekly assignments, and individually working with each student to ensure they had the needed support for their development

STUDENT PROJECTS

Hyperfist

Sep 2025 - Present

- Audio Programmer on an 18-person team where we are creating a 3D fast-paced first person melee combat game about delivering the most radical punch possible using Unreal Engine 5.4 and Wwise 2023
- Showcased at Seattle Indies Expo and Seattle Indies SLICE
- Implementing ui/vfx synchronization with music and sfx, and dynamic audio interactions with charging system

Cretaceous Clash

Sep 2024 - Aug 2025

- Programmer/Designer and Tech Lead on a 5-person team where we created a 2D turn-based action RPG in a C++ custom engine with task-tracking, weekly code reviews, and semi-weekly team meetings
- Engineered an FMOD-powered audio system with features such as BPM-based movement synchronization, auto-ducking, and action-triggered audio transition
- Built an OpenGL and GLFW-based graphics system using GLM, GLSL shaders, batch rendering, and Z-Depth sorting

Nomentum

Oct 2023 - Dec 2023

- Designed and implemented a 2D momentum-based platforming game with a 3-person team in C
- Developed a modular grid-based level building system, streamlining the creation of our 10+ levels
- Implemented and maintained a physics system to handle input-based acceleration, gravity, and collision resolution

EDUCATION

DigiPen Institute of Technology

Redmond, WA

Bachelor of Science in Computer Science and Digital Audio

Aug 2023 - May 2027

Dean's List 2024-2025