Manoel McCadden
Audio Programmer

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SKILLS

Programming Languages: C/C++, Javascript; Familiar with C#, Assembly, Java, Lua, GLSL, R
Computer Science: DSP, Real-Time Sound Synthesis, Data Structures, Algorithms, OS, Architecture, Serialization, Physics
Game & Audio Software: Wwise, FMOD, UE5, C++ Custom Engine, Art & Audio Pipeline Development
Libraries & APIs: OpenGL, GLFW, GLM, Dear ImGUI, JSON for Modern C++; Familiar with Vulkan
Development Tools: P4V, Git, Doxygen, Visual Studio, NeoVim
Development Practices: Code Reviews, Unit Testing, Debugging, Profiling, Code Documentation, Technical Writing
Audio Engineering: Acoustics, Reaper, Mixing, Vocal & Instrument Recording, Live Event & Studio Setup & Teardown

WORK EXPERIENCE

Game Project TA/Mentor — Redmond, WA
DigiPen Institute of Technology — 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 Institute of Technology — 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 Institute of Technology (WANIC Program) — 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

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 our charging system

Cretaceous Clash — Sep 2024 - Aug 2025
- Programmer, Technical Audio 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