Cameron VanderTuig

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PROJECTS

ECH8 - Two year capstone project using Unreal Engine with a studio of nine students for the Duke GDDI Masters program
Audio Lead and Programmer

We are developing a publishable first person story/discovery/puzzle game named Ech8. The game centers around connecting with an alien and learning its language by solving language puzzles. After falling into the event horizon of a wormhole, the player is challenged with communicating in order to survive. I'm responsible for programming core game systems in C++ and Blueprints and implementing all audio and music using WWise at runtime and Ableton for audio editing. I have set up a CI/CD with automated Jenkins Unreal Engine builds and Steam deployments, and I will be responsible for more in the future as the game matures.We are excited to create a polished, publishable version before graduating.

Bubble League - Global Game Jam entry   *Audio Implementer and Programmer*
https://armandpreschutti.itch.io/bubble-league
https://globalgamejam.org/games/2025/bubble-league-6

Over a weekend, our team of eight developed Bubble League, a four person couch Rocket League-like game in Unity where penguins fight two on two to score points on each other's goals. I programmed game state and menu logic in C#, and implemented all of the audio in FMOD. The game's response by players was joyous!!

WORK EXPERIENCE

Teaching Assistant at Duke University   **Durham, NC**
TA for Game Design, Development and Innovation Masters Program   *July 2025 - Present*
- GDDI C++ Coding Bootcamp (Summer 2025)
- C/C++ Programming for Game Development (Fall 2025)
- Software Engineering and Systems for Game Development (Sp

Spatialization Lab at Qualcomm Institute - University of California, San Diego.   **La Jolla, CA**
Applications Programmer   *August 2022 - July 2024*
- Built Unity and Unreal Engine demos showcasing the lab's audio spatialization algorithm Space3D.
- Updated our custom Unreal Engine build that allows more than 8 channels of audio out.
- Setup networking (Including AVB network bridging between labs and IT administration).
- Captured volumetric visual performances using Brekel V3 to complement audio captures.
- Built Rust tools for managing and interacting with lab equipment, mainly Dante devices.
- Implemented Vulkan as a substitute for OpenGL for rendering ray tracing paths in our Spatialization algorithm Space3D.
- Built a VST plugin so that Space3D can be used in DAWs.

Schwartz Center for Computational Neuroscience at University of California, San Diego   **La Jolla, CA**
Unity Game Developer   *April 2023 - June 2023*
- Worked on developing the game Metro, which will be used for research investigating the applications of human-AI teaming for problem solving tasks.
- Refactored existing code so that multiple games could be played simultaneously.
- Updated the external AI-oriented API so that training and testing the AI was easier and more efficient.

EDUCATION

Duke University **Durham, NC**
Game Design, Development & Innovation Masters Program *2024 - 2026*

- **Relevant Coursework:** C/C++ for Game Development, Operating Systems, Game Engines, Software Engineering and Systems for Game Development, Critical Analysis of Video Games

University of California - San Diego **La Jolla, CA**
Bachelor of Science: Cognitive Science with Specialization in Machine Learning and Neural Computation *2019 - 2023*
Minor: Interdisciplinary Computing and the Arts Computer Music and Music Technology *GPA:3.47*

- **Relevant Coursework:** Calc based Prob. & Stats, Calc & Analytical Geometry for Scientists and Engineers, Intro to Python, Linear Algebra, Intro to Statistical Analysis, Intro to Probability, Vector Calculus, Data Science in Practice, Accel. Intro to Programming, Musical Acoustics, Intro to Machine Learning II, Computer Music I, Musical Psychoacoustics, Computer Music II, Supervised Machine Learning Algorithms, Electronic Music Prod & Comp, Audio & MIDI Studio Techniques I, II, III

Choate Rosemary Hall **Wallingford, CT**
High School Diploma *2017 - 2019*
- **Relevant Coursework:** Mathematics: AP Calc AB, AP Calc BC, Linear Algebra, Game Theory, Multivariable Calc. Computer Science: AP Comp Science w/ Java, C++ Programming, A+ IT Essentials (Cisco)

SKILLS & INTERESTS

Proficient In: C, C++, C#, Python, Rust, Unreal Engine (C++ & BP Interaction, Replication, Gameplay Ability System) Unity, WWise, Git, Perforce, Ableton Live & FL Studio, Blender, Jenkins CI/CD
Familiar With: Javascript, Vulkan, VST SDK, JUCE
Interests: Video Games, Programming, Manga, Virtual Reality, Music (Mainly production), Tennis, TTRPGs