Tate Maguire

tatemaguire.games

Education

University of California, Santa Cruz
• B.S. in Computer Science: Game Design
• Minor in Electronic Music
• 3rd year student, graduating June 2027
• GPA: 3.93
• Courses: Data Structures & Algorithms, Computer Systems & C Programming, Assembly Language, Game Dev Experience, Game Dev Patterns, Game Systems Design, Creating Digital Audio, Electronic Music Synthesis, Linear Algebra, Discrete Math, Calculus.

Los Gatos High School
• Graduated June 2023
• GPA: 4.14
• 6 AP classes including Physics C: Mechanics (5/5)

Experience

iD Tech
Coding and Game Design Instructor
June 2025 – Aug 2025 (2 months)
• Taught fundamental Python programming concepts to students using individual and group lessons
• Guided students through the process of game design and game mechanic implementation
• Challenged advanced students with topics such as physics simulation and data structures
• Consistently received positive reviews from parents
• Inspired students to pursue STEM careers
• Carefully handled conflicts between students
• Presented class progress to the CEO of iD Tech and the CEO of Battlebots, Inc.

Game Design and Art Collaboration Club
Sound Producer & Programmer
Sep 2023 – Now (2 years, 3 months)
• Designed and implemented UI systems and fixed scene transitions, ability implementations, and VFX for our recent project *Well-Witches* using Unity/C#
• Implemented custom camera movement for our 2024 Mock Studio game *Malisense*
• Practiced the development cycle of 2-week sprints, vertical slices, playtesting, launching, etc.
• Worked with a group of programmers to design technical systems
• Pitched the game *Comic Chaos* at the club's Pitch Night event in the fall
• Led a team of audio designers and musicians as Sound Producer through production of our current game *Crowd Surfers*

Projects

Tiny Renderer (August 2025)
• Implemented a 3D rendering API in C++
• Used Bresenham's line algorithm and Barycentric coordinates to draw lines and triangles on screen with UV texture mapping and flat shading
• Applied linear algebra to implement perspective projection for accurate rendering of 3D models

Puzzle Game "Ghost" (July 2025)
• Developed a minimalistic puzzle game in Pico-8
• Carefully crafted interesting and evolving puzzles
• Custom built a particle system as a main game mechanic with complex movement behaviors
• Submitted to the Uni Game Jam 2025

2D Platformer "Pink Yellow Swaparoni" (June 2025)
• Solely developed a game using Phaser.js, a JavaScript game development framework
• Designed and implemented an expansive world for players to explore and discover unique abilities
• Finely tuned player movement to make controls feel natural, snappy, and responsive
• Received feedback from playtesters and implemented changes to improve the game
• Synthesized custom sound effects using VCV Rack

Audio Visualizer (October 2024)
• Used Python and Pygame to create a program that takes in an audio file and generates a graphical visualization of the sound
• Applied digital audio processing concepts
• Created a butterworth low-pass and high-pass filter

Skills

Languages: C#, C++, JavaScript, Java, Lua, Python
Game Engines: Unity, Godot, Pico-8, Phaser.js
Graphics/Math: 3D rendering pipelines, perspective projection, OpenGL shaders, linear algebra
Dev Tools: Node.js, Vite, VS Code, command line
Audio Tools: Ableton, Max MSP, VCV Rack, FMOD
Soft Skills: Adaptability, communication, attention to detail, problem-solving, organization

Interests

Electronic Music
• Pursuing a minor in Electronic Music at UCSC
• Audio engineering and production
• Sound design and foley recording
Other: Piano, Dance, Musical Theater, Pixel Art