

TREV JANE

Software Engineer/Technical Designer

trev-jane.net | linkedin.com/in/trev-jane/ | trev-jane@outlook.com | (908) 489-8594

B. S., Computer Science and Game Design | DigiPen Institute of Technology | 3.86 GPA

2022 – 2025

LANGUAGES

C, C++, C#, GLSL, Assembly

TOOLS/Framework

Visual Studio, Visual Studio Code, GitHub, Tortoise SVN, JSON for Modern C++, OpenGL, FMOD, SoLoud, Dear ImGui, Tiled, Custom GUI Systems, Custom Level Editors, Custom Raster Graphics Editors, Reflect-CPP, UEFN

Engines

Custom C/C++ Engines, Unity, Game Maker

TECHNICAL SKILLS

Tools Engineering, Engine Programming, Gameplay & AI Programming, UX/UI Programming, Physics & Collision Systems, Tools & System Design, Version Control

GROUP PROJECTS

Tools/Editor Programmer

09/24 – 05/25

Nitelite Engine, 3D Custom C++ Engine | Team of 9 | Academic Project

- Developed full-featured 3D editor in C++/Dear ImGui with outliner, content browser, inspector, prefab workflow, and customizable UI layouts
- Implemented advanced tools including multi-object selection, translation/rotation/scale gizmos, drag-and-drop parenting, and undo/redo
- Built extensible editor frameworks enabling rapid creation of new editor windows, menu items, and persistent settings
- Implemented full keyboard/mouse/controller input handling with state tracking

Engine/Gameplay/Physics Programmer, Level/System Designer

09/24 – 05/25

Delta Time, Pseudo-3D Rail Shooter – Custom C++ Engine | Team of 4 | Academic Project

- Developed pseudo-3D engine on a 2D framework, enabling collision detection along a simulated third axis and pseudo-3D rendering
- Designed levels and gameplay systems, populating content directly through a JSON-based data pipeline for precise object placement
- Implemented 2D physics and gameplay mechanics to support high-speed rail shooter interactions

Engine/Graphics Programmer, UX/UI Programmer, System Designer, Pixel Artist

01/23 – 05/23

Final Countdown, JRPG – Custom C Engine | Team of 5 | Academic Project

- Engineered core game systems including character stats, battle mechanics, and pseudo-inheritance patterns in C
- Designed and implemented all UX/UI, menus, battle animations, pop-up windows, and interactive game elements
- Developed the overworld using tile-based maps and a custom data serialization pipeline from Tiled maps to engine-readable text files

SOLO PROJECTS

Core Engine Programmer, Technical Designer

06/24 – present

Echodream, 2D Custom C++ Engine | Personal Project

- Custom 2D C++ engine featuring built-in editors for levels, tile maps, and pixel art using a custom GUI system built from scratch
- Implemented a palette-indexed rendering pipeline in OpenGL with an asset workflow tailored for authentic retro-style visuals
- Created a robust 2D physics & collision system (spatial partitioning, Separating Axis Theorem, OnEnter/OnStay/OnExit events)
- Implemented a data-driven asset pipeline converting JSON files into internal variant-based structures for flexible editor and engine workflows
- Developed a flexible in-game menu/UI system powered by polymorphic state machines, enabling dialogue trees, menus, and other systems

Gameplay Programmer, Level/System Designer

07/24

The Adventures of Nandy 2, Procedurally Generated Dungeon – Echodream | Academic Project

- Implemented a fully procedural dungeon generator using constructionist, constraint-driven approach, generating layouts one room at a time
- Created a palette-indexed, randomized visual system, leveraging the Echodream engine to produce unique dungeon aesthetics

EMPLOYMENT

Team Game Projects Teacher's Assistant

DigiPen Institute of Technology

09/23 – present

GAM 100/150 – Freshman team projects semester I & II, **GAM 200/250** – Sophomore team projects semester I & II

- Taught students debugging strategies during pairs programming sessions
- Met with students outside of class to assist in game implementation
- Mentored students on team dynamics and conflict resolution

Computer Science Courses TA

09/23 – 08/25

CS 120/170 – High-level Programming I & II, **CS 225** – Advanced C/C++, **CS 230** – Intro to Game Architecture

- Gave one-on-one assistance to students during lab sessions
- Delivered overviews of lab assignments and corresponding topics
- Assisted students outside of class over Discord and MS Teams

Tutor – Academic Support Lab

09/23 – present

- Provided tutoring in computer science, mathematics, physics, game design, and game implementation
- Provided assistance in-person and online, which may include one-on-one sessions, pairs programming, whiteboard diagramming, etc.