TOMMY TANG

He/Him | Redmond WA, 98052 | (+1) 425-614-9579| [Portfolio](#) | tommy.tang@digipen.edu | [Linkedin](#)

Skill

- Language and engine: C/C++, C#, UNITY, UNREAL, OpenGL
- Tools: Git, SVN, Perforce, ImGui, WSL, Slack

Education

DIGIPEN INSTITUTE OF TECHNOLOGY | BS IN COMPUTER SCIENCE IN REAL-TIME INTERACTIVE SIMULATION
(2020/9 - 2023/12) | GPA: 3.7

NATIONAL TAIWAN UNIVERSITY | BS IN CHEMICAL ENGINEERING
(2012/9 - 2018/6)

Experience

TEACHING ASSISTANT | DIGIPEN INSTITUTE OF TECHNOLOGY (2022/9 – 2022/12)

- Teaching assist in CS225 advanced C++, answering questions of assignments and labs.

QUALITY ASSURANCE ANALYST | RAYARK INC. | (2019/10 - 2020/5)

- Participated in a multi-region published mobile game: Soul of Eden.
- I own an automation tool to test daily quests and player tutorials in Soul of Eden. It saves QA an hour of manual testing one day.

UNITY SOFTWARE ENGINEER | SO-CAYENNE ENTERTAINMENT | (2018/10 - 2019/5)

- Implement a time zone system for a multi-region published mobile game: RENKA. Let designers can easily publish game events in different time zones.
- Build a continuous integration environment to help the team check daily build stability.

Related Works

PROCEDURAL MAZE GENERATION AND AUDIO | HIDDEN WORLD | UNITY

- 3D tech demo for procedural content generation, I use back-tracking method to generate a maze procedurally.
- Do personal research on the applicability of wave function collapse to maze generation.
- Build a tool that randomly selects appropriate sound effects to make it sound more natural.

PHYSICS AND GAMEPLAY PROGRAMMER| SPLIT SPIRIT | CUSTOM ENGINE

- Using the simple Euler method and Newton's law to simulate real-world physics.
- Implement 2D circle, ABBB collision detection, and resolution to simulate collision in real-world.
- Using vector, linear algebra, and physical knowledge about elasticity to simulate spring beds, and implement elastic mushroom beds according to designers' needs to improve the gameplay.
- Implement player controller to improve the basic operation of our game characters and cooperate with the designer to adjust the feel.

SYSTEM AND ART/AUDIO ASSETS PROGRAMMER | DEAL: DARK PILLAR | CUSTOM ENGINE

- Implement button, achievement, win/lose system, splash screen, and main menu design.
- Creating and Importing art assets, BGM, and sound effects to support an all-programmer team.

GAME AI-RELATED PROJECTS | CUSTOM ENGINE AND UNITY

- Marine ecosystem simulator: implement an advanced behavior tree with decision-making via a utility system.
- A* pathfinding: using smoothing and rubber banding algorithm to make the path more natural.
- Terrain Analysis: implement occupancy map, influence map, visibility, search, and propagation function which can be widely applied to various 2D top-down games.