

TOMMY TANG

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Skill

- Language and engine: C/C++, C#, UNITY, UNREAL, OpenGL
- Tools: Git, SVN, Perforce, CI/CD, ImGui, WSL, Slack, RenderDoc, Visual Studio, Visual Studio Code.

Education

DIGIPEN INSTITUTE OF TECHNOLOGY

BS in Computer Science in Real-Time Interactive Simulation

2020/9 - 2024/4

Redmond, WA

NATIONAL TAIWAN UNIVERSITY

BS in Chemical Engineering

2012/9 - 2018/6

Taipei, Taiwan

Work Experience

DIGIPEN INSTITUTE OF TECHNOLOGY - TEACHING ASSISTANT

2022/9 - 2022/12

- Assisted students in answering questions about assignments and labs.

RAYARK INC. - QUALITY ASSURANCE ANALYST

2019/10 - 2020/5

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

SO-CAYENNE ENTERTAINMENT - UNITY SOFTWARE ENGINEER

2018/10 - 2019/5

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

Projects

PROCEDURAL MAZE GENERATION AND AUDIO, UNITY

Hidden World

- 3D tech demo for procedural content generation, used Backtracking method to generate a maze procedurally.
- Did personal research on the applicability of Wave Function Collapse to maze generation.
- Built a tool that randomly selects appropriate sound effects to make it sound more natural.

PHYSICS AND GAMEPLAY PROGRAMMER, C++ CUSTOM ENGINE

Split Spirit

- Using the simple Euler method and Newton's law to simulate real-world physics.
- Implemented 2D circle, AABB collision detection, and resolution to simulate collision in real-world.
- Using Vector, Linear Algebra, and Physics about elasticity to simulate spring beds, and implemented elastic mushroom beds according to designers' needs to improve the gameplay.
- Implemented player's controller to improve the basic operation of our game characters and cooperate with the designer to adjust the feel.

SYSTEM AND TOOL PROGRAMMER, C++ CUSTOM ENGINE

DEAL: Dark Pillar

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

GAME AI-RELATED PROJECTS, C++ CUSTOM ENGINE AND UNITY

- Implemented an advanced behavior tree with decision-making via a utility system.
- Implemented A* Pathfinding: using smoothing and rubber banding algorithm to make the path more natural.
- Implemented Terrain Analysis, Occupancy Map, Influence Map, Visibility Map, Search, and Propagation Function which can be widely applied to various 2D top-down games.