

# TOMMY TANG

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## SKILLS

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**Technical Skills:** C/C++, C#, UNITY, UNREAL, OpenGL, GLSL, Git, SVN, Perforce, CI/CD, ImGui, WSL, Linux, RenderDoc, Visual Studio, Visual Studio Code

**Languages:** Fluent in English, Mandarin.

## EDUCATION

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### DIGIPEN INSTITUTE OF TECHNOLOGY

BS in Computer Science in Real-Time Interactive Simulation

Cumulative GPA: 3.7/4.0; Dean's List 2020 - 2021

Redmond, WA

Sep. 2020 – Apr. 2024

## WORK EXPERIENCE

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### SO-CAYENNE ENTERTAINMENT

Taipei, Taiwan

#### Unity software engineer

Oct. 2018 – May 2019

- ❖ Implemented a time zone system for a mobile game published in multiple regions (戦国 RENKA ズーム!), which allows in-house designers to effortlessly schedule and publish game events across different countries.
- ❖ Implemented a CI (Continuous Integration) environment on Gitlab to help the team check daily build stability.

### RAYARK INC.

Taipei, Taiwan

#### Quality assurance analyst

Oct. 2019 – May 2020

- ❖ Worked on a multi-region published game (Soul of Eden), that has 1m+ downloads on IOS/Android platforms.
- ❖ Implemented an automation tool to test daily quests and player tutorials, saving QA one hour of manual testing per day.

### DIGIPEN INSTITUTE OF TECHNOLOGY

Redmond, WA

#### Teaching assistant

Sep. 2022 – Dec. 2022

- ❖ Assisted students in answering questions about advanced C++ assignments and labs.

## UNIVERSITY PROJECTS

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### RAID PARTY

#### AI and gameplay programmer, Unity, 9 people team project.

Sep. 2023 – Feb. 2024

- ❖ Collaborated with other programmers to design a finite state machine decision making system.
- ❖ Implemented the boss's skill mechanics as well as physical simulations.

### TRINITY FORCE

#### AI and gameplay programmer, Unity & Nintendo Switch, 3 people team project.

Nov. 2023 – Dec. 2023

- ❖ Implemented boss behaviors and boss fight mechanics by using Unity animation events.
- ❖ Integrated player, enemies, boss models, animation, sound, and VFX.

### SUMO SPINNING TOP

#### Gameplay programmer, Unity & Nintendo Switch, solo project.

Oct. 2023 – Oct. 2023

- ❖ Implemented multiple-player battle gameplay and features.
- ❖ Implemented local four-players system and motion control with Joy-Con.

### HIDDEN WORLD

#### AI and sound programmer, Unity & Unreal, 3 people team project.

Sep. 2022 – Apr. 2023

- ❖ Developed a maze structure procedural content generation by backtracking algorithm.
- ❖ Constricted a function that selectively integrates appropriate sound effects to enhance natural auditory experiences.

### MARINE ECOSYSTEM SIMULATOR

#### AI and gameplay programmer, Unity, 3 people team project.

May 2022 – Jul. 2022

- ❖ Implemented an advanced behavior tree that enhances decision-making through a utility system, enabling the actor to make smarter and more rational choices.

### SPLIT SPIRIT

#### Physics and gameplay programmer, C++ custom engine, 11 people team project.

Sep. 2021 – Apr. 2022

- ❖ Implemented 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.
- ❖ Implemented attaching and trampolining function to improve the overall gameplay experience.

## ADDITIONAL

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### SIDE PROJECTS & RESEARCH

- ❖ 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.
- ❖ Conducted research to evaluate the feasibility of Wave Function Collapse algorithm for maze generation.