

Thea Sea

Gameplay Programmer | People Oriented, Result Driven Team Player and Problem Solver
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IWSP Internship Period: 2 Sep 2024 – 11 April 2025

Professional Summary

I am a dedicated and versatile individual known for being an avid team player and having an approachable demeanour. I have an open mind for learning and consistently strive to exceed expectations, bringing a strong work ethic and a quick ability to grasp new skills. With over 3100 coding hours on GitHub and Leetcode, my expertise lies in Machine Learning, Artificial Intelligence and Real-Time Simulation. Skilled in C++, Python, SQL, JavaScript, HTML and CSS, I am a versatile programmer skilled at programming both software and web-based interfaces. Setting myself apart from my peers, I am characterized by my adaptability, flexibility, initiative and resilience, making me a fast learner who can seamlessly integrate into new challenges.

Skills

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|--|------------------------------|
| • Artificial Intelligence | • Interpersonal Skills |
| • Machine Learning | • Critical Thinking |
| • Project Management | • Amazon AWS Cloud Services |
| • Problem Solving | • Sales and Product Pitching |
| • Effective Communication | • Research |
| • React, Node.js, MongoDB, Ruby on Rails | |

Project Experience

Editor Lead, Year 3 GAM300 Software Engineering Project | 2023-2024

- Developed a 3D custom game engine with Vulkan Graphics API, SDL and Assimp
- Created the game editor interface using ImGui, including ECS, Editor Hierarchy and ImGuizmo
- Worked on Asset Loader, Content Browser, Editor Performance Profiler
- Collaborated with UI and Audio Designers to implement UI, BGM and SFX
- Conducted Playtest feedback and debugging to improve our engine

Procedural Content Generation Programmer, Year 2 Artificial Intelligence (AI) Project | 2023-2023

- Developed AI to generate house interior layouts based on user input
- Co-authored a Wave Collapse function for generative AI
- Utilised Unity Engine to simulate the 3D house and interior

Gameplay Mechanics Lead, Year 2 GAM200 Software Engineering Project | 2022-2023

- Developed a 2D custom game engine using OpenGL and GLFW
- Managed gameplay elements such as player physics, animated elements and mouse events
- Gained experience with serializing and deserializing game scenes with JSON files
- Programmed majority of game UI display and functionality

Our game was selected for showcase at the 2023 IMDA Digital for Life Festival

Work Experience

Coding Instructor, The Lab Singapore | 2023-Present

- Facilitated project-based learning experiences that encourage students to work collaboratively to solve problems using robotics and coding via Lego SPIKE
- Oversee daily operations, including planning coding curriculum and conducting workshops

Research Intern, Singapore University of Technology and Design (SUTD) | 2019-2020

- Developed prototypes using Autodesk AutoCAD
- Coded interactive electronic objects using Arduino
- Troubleshooted and fixed prototype bugs
- Cleaned and pre-processed data for research papers
- Developed behaviour trees for prototype AI

Leadership and Accolades

Outstanding Team Project Award (SIT First Year Experience Orientation) | 2023

Vice-President, SIT First Year Experience Orientation | 2021-2022

- Managed logistics, HR and publicity for a university-wide orientation with over 3000 freshmen
- Involved in event proposal writing and locations/vendor bookings for the Student Life Committee
- Acquired leadership, event management and team collaboration skills in committee management

Edusave Good Progress Award | 2019

Colours Award for Leadership | 2018

Education

Bachelor of Science in Computer Science in Real-Time Interactive Simulation | 2021 – Present

DigiPen Institute of Technology

- Game Showcase at IMDA Digital for Life Festival 2023
- Overseas Immersion Program 2023 in DigiPen Redmond, WA, United States of America
- SIT Dragonboat Century Race 2021

Expected Graduation Date: 30 April 2025

GCE 'A' Levels | 2019 – 2020

Eunoia Junior College

Volunteer Experience

Executive Committee Leader and Founder, Citi-YMCA Youth For Causes (YFC) | 2020-2021

- Founded and managed a team of 61 members across 16 educational institutions
- Raised over 275% in profits
- Pitched and wrote fundraising proposals to initiate fundraising sales on various campuses