

Ethan Tan Jun Wei

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EDUCATION

Carnegie Mellon University

Pittsburgh, PA

Bachelor of Science in Information Systems and Computer Science (3.8/4.0 GPA)

Expected June 2026

Relevant Coursework: Data Structures and Algorithms (C), Introduction to Computer Systems (C), Database Development (SQL), Methods for Data Science (R), Introduction to Web Development (HTML, CSS, Javascript, Git), Discrete Mathematics

WORK EXPERIENCE

Coinhako

Singapore, SG

Software Engineering Intern

May 2023 - Aug 2023

- Built technical tools for the firm's proprietary trading system using Python frameworks, Dash and AWS Timestream
- Scaffolded API endpoints, ensuring seamless communication of trading data between the frontend and backend
- Developed API with HTTP methods using a RESTful architecture and implemented Docker containers across projects
- Proactively identified and implemented time and space optimizations to the trading system based on employee feedback
- Refactored code using object-oriented design principles to encapsulate data and enable inheritance between classes

ZUZ Lab

Pittsburgh, PA

Undergraduate Researcher

Sep 2022 - Present

- Assisting Professor Seth Goldstein on ZUZ, a platform that aims to promote equitable access to capital for businesses
- Conducting user and technical research to how currencies on public ledgers can promote trust within local communities
- Educating merchants in Sharpsburg, PA on the functionalities of the platform to facilitate a seamless user experience
- Contributing to the product roadmap by investigating user requirements and deriving how blockchain can support them

Carnegie Mellon University

Pittsburgh, PA

Teaching Assistant

Jan 2023- Present

- Teaching Assistant for Principles of Microeconomics to serve my side-interest in the economics of technology
- Conduct weekly recitations and host office hours to clarify key concepts taught in lecture to a group of 30 students

TECHNICAL EXPERIENCE AND PROJECTS

Spotitector (<https://github.com/ethantanjw/Spotitector>)

Python Application

- Developed an application that recognizes an emotion using computer vision and recommends a song from Spotify's API
- Utilized the OpenCV library to deploy computer vision from a trained dataset to generate output of a person's emotion
- Parsed data in JSON files from Spotify's API and linked songs with facial expressions using OOP and data structures
- Implemented CRUD commands to establish connection within the fullstack and update songs data to be displayed

112 Racer (<https://github.com/ethantanjw/112-racer>)

Game Application

- Conceptualized and developed an interactive multimodal motorsport racing game written using over 1500 lines of code
- Implemented dynamic side-scrolling, realistic vehicle physics and a functional game AI to enhance the user experience
- Utilized the model-view controller framework to divide the logic of the application and increase code reusability
- Held user testing sessions to validate and iterate on the initial MVP to improve the user interface and experience

Personal Portfolio (<https://github.com/ethantanjw/ethantanjw.github.io>)

Front End Application

- Conceptualized and developed the front end of my personal portfolio website using frontend languages and libraries
- Utilized Javascript frameworks to enhance the interactivity of the website and implement design logic and data structures
- Used Git for version control and currently implementing a full stack iteration of the project that includes React.js
- Designed Figma wireframes to create a style guide and conceptualize user interface to ensure a pleasant user experience

SKILLS AND TECHNOLOGIES

Languages: Python, C, Javascript, HTML, CSS, SQL, R

Frameworks and Tools: React.js, Flask, TailwindCSS, Bootstrap, Git, Docker, AWS, Postman, Figma

Interests: Technology, Software Development, Entrepreneurship, Web 3.0, Motorsport