

# Ethan Tan Jun Wei

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## EDUCATION

### Carnegie Mellon University

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

Pittsburgh, PA

Expected June 2025

**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

Software Engineering Intern

Singapore, SG

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

Undergraduate Researcher

Pittsburgh, PA

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

Teaching Assistant

Pittsburgh, PA

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