

Ethan Tan Jun Wei

junweiet@andrew.cmu.edu | ethantanjw.com | github.com/ethantanjw | [linkedin.com/in/ethantanjw](https://www.linkedin.com/in/ethantanjw) | +1 (929)-218-5736

EDUCATION

Carnegie Mellon University

Pittsburgh, PA

Bachelor of Science in Information Systems and Computer Science (3.7/4.0 GPA)

Expected June 2026

Relevant Coursework: Data Structures and Algorithms (C), Computer Systems (C), Functional Programming (SML), Application Development (Javascript), Database Development (SQL), Artificial Intelligence (Python), Data Science (R)

Activities and Societies: Singapore Students Association, Venture Capital Club, Blockchain Club

WORK EXPERIENCE

Coinhako

Singapore, SG

Software Engineering Intern

May 2023 - Aug 2023

- Built technical tools for the firm's proprietary trading system using Dash and AWS Timestream to parse live market data
- Developed internal API using a RESTful architecture to process market data for use in quantitative trading formulas
- Implemented Docker containers to reduce the amount of dependencies required for traders to access various projects
- Proactively identified and implemented time and space optimizations to the trading system based on employee feedback
- Utilized AWS Timestream as a time-series database, wrote SQL queries to obtain relevant market data for the backend

ZUZ Lab

Pittsburgh, PA

Product Management Intern

Sep 2022 - Sep 2023

- Assisted 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 2024- Present

- Teaching Assistant for Information Systems course that covers full-stack web development and database development
- Assisting students with understanding the client-server architecture model and debugging SQL and Javascript code

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 key-value pairs and linked songs with facial expressions using OOP and data structures
- Implemented HTTP methods 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 path-finding algorithms 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

Dynamic Memory Allocator

Computer Systems

- Implemented a dynamic memory allocator from scratch in C consisting of the Malloc, Calloc, Realloc and Free functions
- Optimized throughput to 11900 Kops/Sec and memory utilization to 75% using various data structures and algorithms
- Wrote a heap checker to ensure consistency of the heap, utilized gdb operations to debug and maintain memory safety

SKILLS AND TECHNOLOGIES

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

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

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