

Wesley Sum

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EDUCATION

Virginia Tech

Bachelor Degree in Computer Science

June 2025

Current GPA: 3.7/4.0

Orange Coast College

Associates Degree in Computer Science

June 2023

GPA: 3.7/4.0

RELEVANT COURSEWORK

Courses: Data Structures and Software Design, Computer Organization , Object-Oriented Programming

Awards: President and Dean's List (at Orange Coast College), VT Hackathon 2023 (Best Hack Utilizing Real Estate Data)

EXPERIENCE

IBM Quantum Computing | *Remote*

September 2022 - June 2023

- Completed rigorous coursework on quantum gates and algorithms with a 95% course completion rate, showcasing a strong grasp of foundational quantum concepts.
- Enhanced qubit mappings, resulting in a 20% reduction in simulation errors, demonstrating precise and efficient coding skills.
- Improved algorithmic runtime by 30% for complex processes like Shor's and Grover's algorithms, enhancing their practical usability.
- Developed quantum cryptography protocol with key distribution, recognized for impactful potential, showcasing creativity and problem-solving.

Zengo Corporation Sdn Bhd, Malaysia | *Technology Intern*

February 2021 - August 2021

- Coordinated logistics and documentation for over 5,000 tons of gas oil cargo on board.
- Managed sales of over **10,000 tons** of gas oil cargo to port customers, showcasing negotiation skills, contributing to revenue growth.
- Developed a Python-based calculation program automating gas oil inventory tracking, reducing manual calculation time by **52%**.
- Managed precise daily records, ensuring data integrity and organized electronic devices, enhancing operational efficiency.

PROJECTS

Gentrification Prediction Model | *HTML/CSS, API, Git, Jupyter, VS Code*

- Applied advanced data analysis, modeling techniques, and API for **90% accuracy** in gentrification risk predictions for user-input zip codes.
- Directed the cleansing, training, and testing of 4000+ data points, demonstrating strong leadership and technical expertise in Jupiter Notebook and scikit-learn.
- Engineered a responsive and dynamic JavaScript-driven frontend, utilizing asynchronous data fetching and real-time **DOM manipulation**.

Task Flow Manager | *Typescript, HTML/CSS, React, VS Code*

- Leveraged **TypeScript** and **React** to enhance user engagement and efficiency, integrating drag-and-drop interactions and real-time task status updates
- Implemented **useReducers** for streamlined state management, resulting in a **30%** boost in task organization and productivity.

Personal Website Design | *JavaScript, HTML, Tailwind CSS, VS Code*

- Designed and developed a responsive personal website using HTML, JS, and **Tailwind CSS**, leveraging pre-built classes for rapid styling.

SKILLS

Languages: C++, Java, Python, JavaScript/TypeScript, HTML/CSS

Tools: Git/GitHub, Jupyter, VS Code, IntelliJ, Eclipse

Frameworks: React, JUnit