

TONY VU

☎ 309-585-5052 ✉ quocduyvu6262@gmail.com  [linkedin.com/in/duyquocvu](https://www.linkedin.com/in/duyquocvu)  github.com/quocduyvu6262

Education

University of California, San Diego

Bachelor of Science in Mathematics and Computer Science – GPA: 3.7

Sep 2021 – June 2023

San Diego, California

De Anza College

Associate Degree in Computer Science – GPA: 3.94

Sep 2019 – June 2021

Cupertino, California

Experience

San Diego Supercomputer Center

Software Engineer

January 2023 – Present

San Diego, California

- Worked with a team of 10 on an iOS mobile app for communication between neuroscience residents and attending physicians, serving over 2000 users.
- Developed a journal page with an integrated calendar using SwiftUI for viewing and navigating articles.
- Employed a Go application and Docker to handle the client API for dynamic user comment section on a journal page.
- Utilized a Node.js backend API and WebSocket to create a messaging feature.
- Managed notifications by sharing notification data from Firebase with other UI views in the iOS app, both when the app is running in the foreground and when the user interacts with a notification.

San Diego Supercomputer Center

Back End Developer Intern

June 2022 – September 2022

San Diego, California

- Collaborated with a team of 6 to develop a roommate-finder app for Android and iOS in React Native.
- Used MySQL and Node.js to implement user-filtering features.
- Implemented role-based user authentication and authorization using Firebase Authentication.
- Utilized Firebase Cloud to design and develop an in-app messaging system for real-time and direct user communication.

Projects

iOS Chat App | *Swift UI, WebSocket, Node.js* | [GitHub Link](#)

May 2023

- Created a real-time messaging application using WebSocket, SwiftUI, and Node.js with Express.
- Implemented user registration, search, and profile viewing functionalities.
- Utilized PostgreSQL to ensure secure storage of user data and messages.

Room Occupation Estimation | *Python, Tensorflow* | [GitHub Link](#)

January 2023

- Built a model that estimated the number of people in the room using a dataset collected at different times throughout 4 days from various types of sensors. The model achieved an accuracy of 97%.

Note Taking App | *JavaScript, HTML/CSS* | [GitHub Link](#)

December 2022

- Developed a note-taking app that enables users to share their notes while maintaining their own notes.
- Implemented a CI/CD pipeline to ensure the testing and deployment of the app.

Food Recommender System | *Python, Tensorflow* | [Report Link](#)

November 2022

- Built a recommender system that predicts the user's rating on a specific food recipe with Logistic Regression, Bag of Words and Natural Language Processing on the user's review text. The model performed at a decent accuracy of 80%.

Ray Tracer | *C++, Object-Oriented Programming* | [GitHub Link](#)

November 2022

- Developed a basic ray tracer in C++ to simulate the interaction of light with objects in a virtual scene.
- Defined the scene, generated rays for each pixel, and computed ray-object intersections to decide the color of each pixel.
- Implemented features such as reflections, shadows, and ambient lighting.

Huffman Coding | *C++, Object-Oriented Programming* | [GitHub Link](#)

May 2022

- Implemented a tool in C++ to compress and decompress files using Huffman Coding.
- Used Binary Tree serialization to optimize compressed file's header size by 80%, leading to a 20% increase in overall run-time.

Technical Skills

Languages: C/C++, Python, Java, JavaScript, Swift, Go, SQL

Technologies/Frameworks: Node.js, Django, React, .NET, Docker, AWS, Firebase, Azure, TensorFlow