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EDUCATION

San Diego, CA **University of California, San Diego** **Fall 2021 – June 2023**

- B.S. in Mathematics and Computer Science. Major GPA: 3.7.
- Undergraduate Coursework: Advanced Data Structures and OO Design, Software Engineering, Design and Analysis of Algorithms, Computer Organization and Systems Programming, Computer Graphics, Recommender System, Theory of Computability, Discrete Mathematics, Graph Theory, Statistical Methods.

EXPERIENCE

iOS Developer Intern **San Diego Supercomputer Center** **Fall 2022 – Spring 2023**

- Worked with a team of 10 on an iOS mobile app for communication between neuroscience residents and attending physicians, serving over 500 users.
- Developed a journals page with a built-in calendar using **SwiftUI** that enables users to view and navigate between articles.
- Employed a **Go** web application and **Docker** to handle the client API and create a dynamic user comment section within a journals 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.

Back-End Developer Intern **San Diego Supercomputer Center** **Summer 2022 – Fall 2022**

- 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** (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.
- **Note Taking App** (2022). Developed a note-taking app that enables users to share their notes while maintaining their own notes using **JavaScript** and **HTML/CSS**.
- **Food Recommender System** (2022). Built a recommender system that predicts the user's rating on a specific food recipe with Logistic Regression, Bag of Words mode, Natural Language Processing, **Python**, **Tensorflow** on the user's review text. The model performed at a decent accuracy of 79%.
- **Room Occupation Estimation** (2022). 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%.
- **Ray Tracer** (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 in the image, and computed ray-object intersections to determine the color of each pixel. Implemented features such as reflections, shadows, and ambient lighting.
- **Huffman Coding** (2021). 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.

Languages and Technologies

- C/C++, Java, Python, JavaScript, Swift, Go, SQL
- Node.js, React, Django, AWS, .NET, Docker, Git, Firebase, Azure, TensorFlow