Sacaar Jain

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EDUCATION

University of California, Los Angeles (UCLA) **Los Angeles, CA | Graduating December 2024**
B.S. in Computer Science GPA**:** 3.8/4.0
Relevant Coursework: Data Structures and Algorithms, Programming Languages, Computer Networks, Fundamentals of Artificial Intelligence, Computational Genomics, Data Management Systems, Theory of Computing, Software Construction

WORK EXPERIENCE

Undergraduate Researcher | *The Golshani Lab at UCLA Health* *(Los Angeles, CA)* **3/2024 – Present**
- Working on an application that streamlines the process for novel voltage-imaging processing, allowing for robust monitoring of neural activity in neuron samples of mice
- Building a GUI using Python and its many packages including, but not limited to, PyQt5, numpy, etc to perform complex mathematical computations required in the voltage-imaging process
- Future development includes incorporating Machine Learning to identify neurons and performing trace extraction

Full-Stack Intern | *XCare* *(Lake Forest, CA)* **6/2022 – 12/2023**
- Utilized low code app building options to create a baseline application showcasing necessary organization and UI of potential future mobile application
- Collaborated with software engineers to develop backend infrastructure creating an MVP in Node.js and Express, while also improving frontend design in React Native under a MERN stack framework
- Conducted bug testing on iOS and Android platforms to assist development of application and ensure quality of MVP before presentation

Undergraduate Researcher | *Elegant Mind Club Lab* *(Los Angeles, CA)* **3/2023 – 6/2023**
- Focused on improving object-detection models through real-time 3D depth perception by synchronizing drones with stereoscopic first-person view systems
- Built an experimental pipeline utilizing live video stream feed from a Tello drone into Vive VR headsets on Unity VR, ODLC software written in Python to detect objects, and a Raspberry Pi to compile data collected from motion detection cameras and the VR headset on user movements
- Research helped in optimizing real-time ODLC processes and enhancing video quality of pipeline

TECHNICAL PROJECTS

TrailQuest App | (TrailQuest Devpost) **4/2023 – 4/2023**
- Developed an app using React Native, Firebase & Firestore, ChatGPT API, RapidTrails API, and Google Maps API that motivates users to explore their city using our Quests system, assigning trails based on user's requirements

Brewin Language Interpreter | (Brewin Interpreter GitHub) **9/2023 – 12/2023**
- Wrote an interpreter using Python for a new programming language called Brewin from scratch incorporating dynamic scoping, dynamic typing, first class functions, prototypal inheritance, etc

QED-AI (Quod Erat Demonstrandum-AI) | (QED GitHub) **4/2023 – 4/2023**
- Developed a website using React, MathPix API, and ChatGPT API allowing students to verify any math proof by inputting text and/or images of math work

MyCourse Website | (MyCourse GitHub) **9/2022 – 12/2022**
- Utilized a MERN stack framework to build a website simplifying UCLA's planner system using UCLA's APIs, combining the functionality of multiple websites for selecting classes into one

VOLUNTEER EXPERIENCE

Volunteer Lead | *Little Tokyo Service Center* *(Los Angeles, CA)* **9/2022 – 12/2022**
- Engaged with the Little Tokyo Service Center's Los Angeles afterschool program to provide mental, physical, and academic support in areas of STEM and the arts to underprivileged children

SKILLS

Programming: C++, Python, JAVA, React/React Native, JavaScript, Node.js/Express, HTML, CSS, Verilog
Technical: MongoDB, DynamoDB, Adalo, Unity VR, Arduino, Raspberry Pi, Adobe Lightroom, Basys 3, SolidWorks
Operating Systems: Windows, Linux Ubuntu, Linux, MacOS