

ALAN NGUYEN

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EDUCATION

University of California, Los Angeles

Expected Jun 2024

B.S. in Computational and Systems Biology – Data Science

GPA: 3.879 (Dean's Honors List)

Relevant Coursework: Algorithms & Complexity, Software Construction, Data Structures & Algorithms, Machine Learning, Discrete Mathematics, Linear Algebra, Differential Equations

RELEVANT SKILLS

Programming Languages: Python, C++, JavaScript, HTML/CSS/SCSS, Java, R

Tools: React, React Native, Git, Figma, Firebase, MongoDB, Node.js, Express.js, Linux, x86/64

WORK EXPERIENCE

IDONTMIND, *Mobile Application Developer*

Nov 2023 – Present

- Developed mobile application using **React Native** for 501(c)3 nonprofit IDONTMIND, inspiring conversations about mental health and providing free education and resources to audience of 100k+
- Architected a secure authentication system with a robust login and registration pipeline, integrated with **MongoDB** and **JSON** web tokens to ensure data integrity and user privacy
- Implemented dynamic interval-based alert system increasing visits to check-in pages for logging users' moods, habits, activities and emotional state by **42%**
- Created a trend analysis page to display data visualizations based off users' mood/habit logs

UCLA Asian American Studies Center, *Frontend Developer*

Jul 2023 – Present

- Engineered a textbook web application pioneering Asian American Studies in **750+** LA public schools
- Wrote **jQuery** based **AJAX** requests to retrieve content from a remote server for display on web pages
- Used **JavaScript** and **HTML** to build responsive textbook pages and relevant popups, cards and video

TransCanWork, *Contract Software Developer*

Oct 2022 – Sep 2023

- Developed full-stack **React** web application for nonprofit organization TransCanWork
- Migrated data from a Google Spreadsheet that logs **2500+** jobseekers into a user-friendly, centralized application increasing user satisfaction by **81.6%**
- Made **API calls** to retrieve, display and update each user's demographic and employment milestone information within home pages connected to the **Firebase** non-relational database
- Developed a dynamic assessment component with integrated **Material UI** and **Bootstrap** components

Junction of Statistics and Biology, *Machine Learning Research Assistant*

Jan 2023 – Jun 2023

- Engineered **Python** program investigating the performance of a **support vector machine** classifying cells based off single-cell RNA sequencing data with varying class definitions
- Utilized **NumPy**, **SciPy**, **pandas**, **Matplotlib** and **scikit-learn** libraries to develop and test 26 individualized simulated datasets, each with **25,000+** cell entries from the Broad Institute

PROJECTS

DopaMind Study Platform

- Utilized **Cohere API's** language processing capabilities to generate specialized anagram word prompts for students with ADHD, exercising their visual and executive functioning
- Embedded **AssemblyAI** to implement voice transcription feature that records the student's verbal expression of their ideas and extends on them using an AI chatbot
- Used **React hooks** to accurately manage timer state and intervals of a Pomodoro timer component, complete with radio buttons to switch back and forth between break and work time

SEASHarmony Matching Program

- Utilized **scikit-learn's** K-means algorithm to pair 1500+ incoming engineering students with upperclassman mentors, creating clusters based on qualitative survey answers
- Wrote recursive function in **Python** that defined and reorganized clusters based on remaining collection of students and mentors upon each call