PARAM SHAH

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EDUCATION

University of California, Los Angeles
B.S. in Computer Science and Engineering
GPA: 3.7 / 4.00
Class of 2022

AWARDS AND HONORS

Upsilon Pi Epsilon Inductee – CS Honor Society at UCLA
Engineering Dean's List
Facebook Puzzle Hunt 2019 – 2nd place
Google Tech Challenge 2019 – 7th place overall
Alpha Lambda Delta and Phi Eta Sigma - National Honor Society

SKILLS

C++, C, Python, RISC-V, HTML, CSS, R, Linux, Emacs, Git, Shell
Learning: iOS (React Native), Machine Learning (Embedded ML)

COURSEWORK

Computer Science and EE
CS32 - Data Structures
CS33 – Computer Architecture
CS188 – Data Science Fundamentals (Planned)
CS111 – Operating Systems (Planned)
CS180 – Algorithms (Planned)
CS35L – Software Construction Laboratory
CSM51A - Logic Design of Digital Systems

Math
Math61 - Discrete Math
Stats100A – Probability Theory
Math33A/B - Linear Algebra and Differential Equations

TOP PROJECTS

Software Lead | Bruin Spacecraft Group – Project Rapid
April 2019 – Present

- Designed and developed a CubeSat with the MiXI (Miniature Xenon Ion) thruster as a propulsion system on our aircraft with a group of 15 people.
- Lead a team of 2 other software engineers to build the computer system that can communicate with various sensors and actuators, and can do task scheduling, data downlink, systems maintenance, and detecting anomalies.
- Coded a "watchdog" for the flight computer that ensures the correct operation of the entire system as well as access to critical features in case of flight computer failure. (C/C++ and Python)

Software Developer | Creative Labs – BR3W
October 2019 – December 2019

- Coded the backend and frontend of the mobile app that can control a coffee machine. Backend involves communication to the microcontroller in the coffee machine through Wi-Fi/Bluetooth for data and command transfer while frontend involves page navigation, state change and animations.(React Native)

Software Developer | Bruin Spacecraft Group – Project Reach
November 2018 – June 2019

- Built a CubeSat to transmit live data at an altitude of 30,000 feet. Partner with Rocket Project at UCLA that will fly our CubeSat as a payload on their rocket.
- Responsible for writing the code that enables communication between the CubeSat and the ground station and the communication and data collection of various sensors with the flight computer. (C/C++)

AI Game Playing

- Coded C++ classes that worked together to implement the game of Kalah (or Mancala) – a popular board game – with AI functionalities.
- Implemented a smart AI player in the game that traverses down levels of the game tree (using minimax algorithm) to find all paths that lead to a win and determine the next best move to play for the AI to have a 100% win rate.

SafeMaps

- Build a prototype of an iOS app that provides pedestrians a safe route to walk by avoiding areas that have higher crime rates.
- The app uses the Google Directions API, crime data from the city of LA, and a custom algorithm to determine the safest and most efficient route between two points. Responsible for coding the back-end of the app. (React Native)

VOLUNTEER EXPERIENCE

Project Literacy | Student Tutor
April 2019 – Present

- Tutor middle school and high school kids from underrepresented communities in Vernon Springs, Los Angeles. Teach them Math, Science, and English and help them with their homework.
- Awarded best tutor of the quarter in Spring 2019.