

Aristotle Henderson

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Education

University of California, Los Angeles (UCLA)

Sophomore, September 2019 – June 2023 (projected)

- B.S., Computer Science and Engineering
- 4.0 GPA
- Dean's Honor List, HKN honor society
- Coursework: Data Structures and Algorithms, Computer Systems and Architecture, Multivariable Calculus, Discrete Mathematics, Physics (Mechanics)

Technical Skills

- Proficient with Python, C/C++, JavaScript, Bash; experience with Java, Swift, HTML5/CSS3, x86 assembly
- Adobe Cert. for Photoshop; proficiency with Adobe CC
- Experience integrating AWS, Firebase, Node.js
- Proficient with Xcode, Android Studio, React, Git
- Well-developed research skills in diverse fields
- Advanced writer with experience in technical and creative writing

Work Experience

Scalable Analytics Institute at UCLA – Research Assistant

January 2020 – present

- Advancing work on a research project that aims to improve identification of text using natural language processing (NLP)
- Studying NLP academic papers and testing existing supervised language models against large datasets to build upon existing progress in neural network development; building data processing code for use with neural network data ingestion
- Utilizing technologies including Python, PyTorch, and Docker to build novel tag generation machine learning algorithms

Naval Postgraduate School – Research Intern

June 2018 – July 2018

- Guided team's Android app creation, enabling interaction among defense experts; mentored by Dr. Edward B. Rockower
- Employed Firebase Authentication/Database/Storage, Android Studio, Java libraries to host Global ECCO's strategy games and other media, allows gameplay between multiple devices with the use of many Android activities and fragments
- Spearheaded the development of an iOS application in Swift with a matching feature set and backend integration
- Authored technical reports and a research poster detailing the project's findings and achievements; progress enabled by my work included in report to our OSD sponsor's 2018 Report to U.S. Congress

Projects and Competitions

Bruin Racing Baja Team at UCLA – Member of Electronics Sub-team

September 2019 – present

- Creating electronics to assist the driving of and collect data about an advanced all-terrain vehicle built to compete in Baja SAE off-road competitions; working with low-level control of and interaction with vehicle subsystems
- Constructed a Raspberry Pi-based live data collection system for further analysis of vehicle behavior

FIRST Robotics Team 2035 – Head of Autonomous

August 2015 – June 2019 (member)

- Commanded the development of autonomous programming for Team 2035, a prior national FIRST Championship team
- Led the development of a novel autonomous technique making use of live movement data for decision making
- Rewrote subsystems of robot's code, including its drivetrain and sensors, thus improving code clarity and user interaction
- Conducted implementations of ad-hoc improvements and fixes to robot's codebase during competition events

Vibecheck: a sentiment analysis search engine

April 2020 – June 2020 (project)

- Collaborated with a group of student developers on a React- and Python-based web application; uses a machine learning model to provide sentiment information about any topic from a collection of social media websites
- Developed the backend MySQL database for search trend storage, all frontend React webpages for user interaction, and data visualizations to display search results; contributed to sentiment algorithm's design and social media API integration

C++ route planning application

March 2020 (project)

- Implemented A* for routing, a variably sized hash map for storing real map data, and simulated annealing to solve the traveling salesperson problem; generates an optimal, point-to-point route to multiple destinations
- Adhered to an assigned specification under a deadline and strict standards to its completion

Awards

- Offered University of California Regents Scholarship at UC San Diego
- Offered Presidential Scholarship at the University of Southern California

March 2019

April 2019