Andrew H. Lu

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Education

University of California, Santa Barbara
- Bachelor of Science in Electrical Engineering (transitioning to Computer Engineering)
- Expected Date of Graduation: June 2021
- Cumulative GPA: 3.94
- College of Engineering Honors Program
- Relevant Coursework: Problem Solving with Computers (C++), Object Oriented Design, Analog and Digital Circuits and Systems

Skills

- JavaScript, Node.js, HTML, and CSS scripting
- Basic C++, Python, and MATLAB programming
- Experience with NoSQL Databases via Firebase
- Hardware Development using Arduino
- Learning the Electron framework
- Proficiency in Programming Tools: UNIX, Git, GitHub, Sublime Text, Postman, npm
- Proficiency in Microsoft Office
- Experience with 3D Modeling (Fusion 360)

Projects *(Learn more about these projects at andrewhlu.com)*

Type Type Revolution – Multiplayer typing contest to type the fastest while sabotaging other players.   *Feb 2019*
- Server-less web application created using Firebase (Realtime Database) and written in HTML/CSS and JavaScript.
- Developed database structure, algorithm for counting words-per-minute, room system, and design for webpage.

IEEE Website *(ucsbieee.org)* – Jekyll-based website, member database, and online store for UCSB IEEE.   *Sep 2018*
- Redesigned organization website using Jekyll and Markdown to allow easy editing by officers and project managers.
- Created an e-commerce store using Square's API and lab membership database using Firebase.

UCSB Dining Cortana Skill – Voice assistant skill to recommend a Dining Common based on food you like.   *Apr 2018*
- Utilized Microsoft Bot Framework and Azure to process user input and store data. Written in Node.js using JavaScript.

ScaVision Hunt – A real-time multiplayer scavenger hunt, in real life.   *Jan 2018*
- Created using Google Cloud's Vision Machine Learning API and Firebase (Realtime Database, Cloud Functions, etc.).
- Wrote backend cloud functions in Node.js using JavaScript and designed frontend using HTML/CSS and JavaScript.

Blue Pearl Scanner – Mobile ticket scanning for shorter lines and efficient check-in.   *Jan 2017*
- Created using a custom Google Scripts backend linked to a spreadsheet, and an external app barcode scanner.
- Revised in 2018 to include QuaggaJS, a web-based barcode scanner, and an HTML frontend using Bootstrap.

Honors and Awards

- **Type Type Revolution** – Winner of Best Game/Game Design Award, SLO Hacks   *Feb 2019*
- **Dean's Honors Recipient, 4 Quarters** – Awarded to students with a GPA of 3.5 or higher   *Dec 2018*
- **UCSB Dining Cortana Skill** – Honorable Mention Recipient at Microsoft Cortana Hackathon   *Apr 2018*
- **ScaVision Hunt** – Event Finalist and Honorable Mention Recipient from Firebase, SB Hacks   *Jan 2018*
- **Blue Pearl Scanner and Fundraiser POS** – Scholarship Recipient, Dougherty Valley HS Music Program   *May 2017*
- **VEX Robotics** – State Tournament Champion and Two-Time World Championships Competitor   *2016, 2017*

Experience

Undergraduate Lab Assistant, ECE 5 – UC Santa Barbara   *Jan 2019 – Mar 2019*
- Mentor students about C++, Arduino, and circuit theory, in ECE 5, a project-based engineering course aimed at exposing freshmen to the techniques used to prototype and design basic circuits.
- Hold weekly office hours for students to get assistance outside of lab hours.
- Organize the annual ECE 5 Science Fair, where students present their projects at the end of the quarter.

Publicity Chair and Webmaster – UCSB IEEE Student Branch, Santa Barbara, CA   *May 2018 – Present*
- Design a new Jekyll-based website, complete with store, member database, resume book, and more.
- Build a device to manage IEEE lab attendance, log member entry/exit, and verify student lab membership purchases, using a Raspberry Pi, magnetic stripe reader, and passive infrared sensor.
- Design posters for organization events, manage scheduling of projects and office hours, and maintain social media.
- Manage sales and inventory of organization's apparel.