

# 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
- 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)*

**IEEE Website ([ucsbieee.org](http://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, Storage, Hosting).
- Backend written in Node.js using JavaScript, frontend created using HTML/CSS and JavaScript.

**Candy Bar Fundraiser POS** – A modified Point-of-Sale to simplify candy checkout and inventory. Mar 2017

- Created using a custom Google Scripts backend linked to a spreadsheet. Revised in 2018 with an HTML frontend.
- First deployed for 2017 fundraiser - Sold 7,020 candy bars compared to 4,690 in previous year.

**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.

## Honors and Activities

- **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
- **Fundraiser POS and Blue Pearl Scanner** – 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 Raspberry Pi.
- Design posters for organization events, manage scheduling of projects and office hours, and maintain social media.
- Manage sales and inventory of organization's apparel.