

# Andrew H. Lu

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## Education

University of California, Santa Barbara, Class of 2021

- Bachelor of Science in Computer Engineering
- Cumulative GPA: 3.86
- College of Engineering Honors Program
- Relevant Coursework: Advanced App Programming (Java), Object Oriented Design (C++), Computer Architecture, Digital Design, Analog & Digital Circuits

## Skills

- C++, Java, and basic Python programming
- JavaScript, Node.js, HTML, and CSS scripting
- Hardware Development using Verilog
- Experience working in an Agile / Scrum environment
- Proficiency with tools: UNIX, Git, GitHub, Perforce, Firebase, VS Code, Sublime Text, ModelSim, Autodesk Fusion 360, and Microsoft Office

## Experience

**Software Development Intern, Smart Speaker Platform** - Sonos Inc., Boston, MA

*Jun 2019 - Sep 2019*

- Developed a new interface for playing content from an HTTP source using the clocking mechanisms for AirPlay 2, complete with support for metadata, radio stations, radio playlists, and more.
- Updated device cache and test environment interfaces to implement type safety and allow for automated CI testing.
- Assisted in creating an internal Electron app for prototyping voice experiences using the Control API.

**Undergraduate Lab Assistant, ECE 5** - UC Santa Barbara

*Jan 2019 - Mar 2019*

- Mentored 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.
- Held weekly office hours for students to get assistance outside of lab hours.
- Organized the annual ECE 5 Science Fair, where students present their projects at the end of the quarter.

**Internal Vice President and Webmaster** - UCSB IEEE Student Branch, Santa Barbara, CA

*May 2018 - Present*

- Design a new Jekyll-based website, complete with member database, resume book, apparel store, and more.
- Build a device to manage IEEE lab occupancy, log member entries, and verify lab memberships, using a Raspberry Pi.
- Organize events and workshops for members to improve on technical and professional skills.
- Manage scheduling of projects, officer lab hours, and sales / inventory of organization's apparel.

## Projects *(View my full list of projects at andrewhlu.com)*

**Rap Scorer** - Online rap battle client that transcribes and scores your rhymes in real time.

*Sep 2019*

- Created using rev.ai Speech-to-Text and Datamuse APIs, and a Node.js backend using socket.io for communication.
- Designed user interface from scratch and developed parts of client-side logic regarding WebSockets.

**Mineyeeter** - Minesweeper redesigned into a collaborative, multiplayer VR game.

*Apr 2019*

- Created using A-Frame (WebVR) and Firebase Realtime Database, written in HTML/CSS and JavaScript.
- Developed VR environment layout, enemy spawns, bomb-throwing mechanisms, and parts of game logic.

**Type Type Revolution** - Battle Royale 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](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.

## Honors and Awards

**Rap Scorer** - Winner of Best Hack for Building Community from Facebook, HackMIT

*Sep 2019*

**Dean's Honors Recipient, 6 Quarters** - Awarded to students with a GPA of 3.5 or higher

*Jul 2019*

**Type Type Revolution** - Winner of Best Game/Game Design Award, SLO Hacks

*Feb 2019*

**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*