Andrew Gordon

San Anselmo, CA| 303-646-7227 | andgordo@ucsc.edu | [Portfolio](#) | [LinkedIn](#) | [Github](#)

Application Software Engineer

WORK EXPERIENCE

Freelance   **San Rafael, CA**
Full-Stack Software Engineer   *August 2021 – Present*
- Develop cross-platform finance applications for two clients on Web, Android, and IOS utilizing Node.js, JavaScript, Flutter, Python, and Google Cloud Platform services such as Firebase, Firestore, and sign-ins.
- Deploy Node.js backends with NoSQL databases storing user data and cached application programming interface (API) calls for stock market quotes, reducing reliance on external services up to 90%.

UCSC-Cisco Sponsored Project   **Santa Cruz, CA**
Backend Software Engineer   *January 2021 – July 2021*
- Ensured 100% encrypted communication in a mesh network by implementing key cryptography and adaptive routing with virtual private networks, BGP, Golang, and AWS EC2s (scrum master of the AGILE Team).
- Enabled successful delivery of two releases in six months by composing weekly progress reports and collaborating with a team of network engineers at Cisco (each release generated during five, two-week sprints).

University of California, Santa Cruz   **Santa Cruz, CA**
Electronic Music Teaching Assistant   *January 2020 – March 2020, January 2021 – June 2021*
- Provided weekly technical assistance to 25 students working with audio software for music production (Ableton Live, Reaper, FL Studio) and digital signal processing in Max MSP.
- Guided three workshops for sound design via granular synthesis and coding of virtual instruments in Max MSP.

iD Tech   **San Francisco, CA**
Computer Science Instructor   *July 2020 – February 2021*
- Developed and taught computer science curriculum for Python, Machine Learning for audio classification, circuitry, and JavaScript to over 50 students in person and over 100 students in online sessions (ages 8 to 19).

Lantern Medical   **San Rafael, CA**
Software Engineering Intern   *May 2020 – December 2020*
- Devised C programs for STM micro-processors to retrieve and parse real-time streams of remote distance sensor data (time of flight up to two meters) to enable touchless, gesture-activated devices.

PROJECT AND LEADERSHIP EXPERIENCE

Poly NS Tuner – Polyphonic Pitch and Scale Detection in Python   **Santa Cruz, CA**
Audio Application Software Engineer   *January 2021 – Present*
- Designed algorithms for processing .wav files utilizing Fourier transform, windowing, harmonic weighting, and pitch tracking to enable polyphonic pitch (up to five fundamental notes) and scale detection in Python.

GoGuard – Mesh Network Generator – Sponsored Project by Cisco   **Santa Cruz, CA**
Backend Software Engineer   *January 2021 – July 2021*
- Increased testing efficiency by 30% with unit tests via virtual networks in Docker, AWS EC2, and Bash scripts.
- Implemented proxying of requests in services, allowed the system to adapt and have a fault tolerance of 99%.

UCSC Soundmap Research Group – Geolocated Ambisonic Recordings   **Santa Cruz, CA**
Undergraduate Research Engineer and Field Recorder   *January 2020 – July 2020*
- Launched development of Python scripts for finding 100 optimal recording locations in eight square kilometers.
- Generated and contributed metadata for 25, ten-minute long ambisonic field recordings at 25 unique locations.

EDUCATION

The University of California, Santa Cruz   **Santa Cruz, California**
Bachelor of Science in Computer Science, Minor in Electronic Music   *Graduation Date: June 2021*
- Awards/Organizations: **3.8 GPA,** Cum Laude Honors, Dean's Honors List, Club Volleyball President.

SKILLS & INTERESTS

Skills: Python, Java, JavaScript, C, Ableton, Max MSP, Librosa, Tensorflow, Scikit, NumPy, JUCE, VCV Rack, HTML, PostgreSQL, NoSQL, Docker, Git, Node.js, React, Flask, GCP, AWS EC2, Linux, Flutter, Dart, AGILE

Interests: Application Development, Computer Audio Applications, Digital Signal Processing, Data Engineering and Analysis, Machine Learning, Algorithmic Analysis, Sound Design, Music Production, Piano, Volleyball