

# NICHOLAS Q. BUI

San Jose, CA

[nicholasqbui@gmail.com](mailto:nicholasqbui@gmail.com) ♦ [linkedin.com/in/nickkbui](https://www.linkedin.com/in/nickkbui) ♦ [nickkbui.github.io](https://nickkbui.github.io)

## EDUCATION

---

**University of California, Berkeley** - Berkeley, CA

2023 - 2027

BS, Electrical Engineering and Computer Science

- Relevant Coursework: Intro to Programming, Data Structures, Analog Circuits I/II
- Clubs/Organizations: Combat Robotics at Berkeley

**Independence High School** - San Jose, CA

2019 - 2023

HS Diploma, Science Technology Engineering and Mathematics Magnet, Valedictorian

- Relevant Coursework: AP Calculus AB/BC, AP Computer Science Principles, AP Computer Science A, AP Physics C: Mechanics, Principles of Engineering, Introduction to Engineering Design, Aerospace Engineering

## SKILLS

---

**Software** Java, Python, SQL, C++, HTML/CSS, Git, Google Firebase, Android Development

**Hardware** Autodesk Fusion, Solidworks, Circuit Design/Analysis, Electronics Prototyping

## EXPERIENCE

---

**Robotics Engineer, Electrical and Software Subteam**

Sep 2023 - Present

*Combat Robotics at Berkeley*

*Berkeley, CA*

- Designing, assembling, and testing the electronics and firmware behind the weapon and drive systems of "Whisk", a 15 lb battle bot we're building for the "Northern California Combat Robotics Championship"
- Assisting mechanical subteam with material selection, hardware manufacturing, 3D modeling, and simulations

**SIMR Bioengineering Intern**

May 2022 - Aug 2022

*Stanford University*

*Palo Alto, CA*

- Designed, programmed, and prototyped the electronics and firmware for "Apnostics", a biometric sensor system for sleep apnea diagnosis using C++, Arduino BLE, and Autodesk Fusion
- Ran extensive cross-comparison accuracy tests between our sensors and existing biometric sensors, ultimately achieving over 97% sensor accuracy

## PROJECTS

---

**ASLens** Prototyped a machine learning-based ASL interpretation device using Autodesk Fusion, Raspberry Pi, OpenCV, and Python. Users can form ASL signs and the device uses an LSTM to translate the signs into audible speech. The project won 4th place at the 2023 MESA National Engineering Design Competition.

**Emoticam** Developed an accessible, hands-free, digital communication tool using OpenCV and Python to convert hand gestures and facial expressions into corresponding emojis and keyboard characters. The project won 1st place at the 2022 Los Altos Hackathon, qualifying my team and I for Pinnacle 2023, the Olympics of Hackathons.

**FinanceLingo** Created a beginner-friendly financial education mobile app using Java, Android Studio, and Google Firebase. Users can learn about personal finance through fun and interactive activities while their progress is stored and accessed in real time through a cloud database. The project was submitted to the 2022 Congressional App Challenge for CA-17 and was awarded the Certificate of Special Congressional Recognition by Rep. Ro Khanna.