# Vincent Li

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## EDUCATION

**Bachelor of Science in Computer Systems Engineering**                                                                    December 2021
- Barrett, the Honors College at Arizona State University                                                             GPA: 3.38

## SKILLS

- C/C++, Java, JavaScript, Python, SQL, Bash, MATLAB, MIPS, x86, Linux, Git, Jupyter Notebook, Android app development, web app development, relational database management
- Embedded systems, Xilinx Vivado, Verilog, LTSpice, Autodesk Eagle, computer networks

## PROFESSIONAL EXPERIENCE

**Algorithm Developer | ASU School of Arts, Media, and Engineering | Tempe, AZ**          August 2020 - April 2021
- Worked with the Lifelog Project at ASU, which researches the use of machine learning on wearable data to verify the effectiveness of medical studies and interventions
- As part of my honors thesis project (ASU), developed and deployed a web application called SigNorm (web-app.li-vincent.com) for the purpose of conveniently preprocessing time-series data in a code-free user interface
- Devised a preprocessing method for a human activity recognition dataset which improved prediction accuracy on a 1D convolutional neural network

**Student Software Engineer | ASU Research Computing | Tempe, AZ**          May 2019 - August 2019
- Gained experience with using Linux, Bash scripts, C++, Python, and Slurm Workload Manager to interact with the high-performance computing cluster
- Presented a poster ("Porting CPU Agent-Based Modelling Applications to GPU") and participated in the student program at PEARC19 in Chicago, IL
- Presented a lecture to a graduate-level anthropology research class on how to implement agent-based modeling on the ASU Agave research computing cluster

## ACADEMIC PROJECTS

**ASU | Capstone**                                                                                                          February 2021 - Present
- Designed, developed, and deployed an ArcGIS dashboard to present air quality data of IoT sensors in South Phoenix
- Successfully worked with two classmates and three project sponsors (School of Sustainability at ASU) to devise and integrate the different parts of the application
- Created and launched a Microsoft SQL Server database on Azure to store sensor info and air quality data, as well as writing SQL queries for the dashboard to use
- Wrote an informative developer's manual about the database for the project sponsors

**ASU | Embedded systems project**                                                                       November 2020 - December 2020
- Created a circuit using the FRDM-KL46Z development board, with an ARM Cortex-M0+ processor, to control the speed of a motor based on an analog input from a potentiometer
- Used the PIT module the trigger timer interrupts, the ADC module to read the analog voltage, and the PWM module to change the speed of the motor

**ASU | Network application**                                                                               October 2020 - November 2020
- Programmed a network application using Java and its socket programming libraries
- Implemented both client-server and peer-to-peer networks with UDP socket communication

## ACTIVITIES

**Race Director (2020-2021) / Board Member | Cycling Club at ASU | Tempe, AZ**          August 2017 - Present
- Treasurer 2019-2020
- Safety Officer 2018-2019