

# Qi Heng Lee

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<https://github.com/QiHengLee>

## EDUCATION

**University of Minnesota Twin Cities – B.S. Computer Science**

Expected Graduation: Dec 2021

GPA: 3.50 / 4.00 | Technical GPA: 3.71 / 4.00 | Award: Dean's List

## EXPERIENCE

**Incoming Undergrad DevOps Technical Intern**  
*Intel Corporation*

**Start Date: 18 May 2020**

**Web Developer Research Assistant**  
*Uni. of Minnesota Center for Filtration Research*

- Developed an air filter modeling & design web application for 20+ CFR member companies collaborating with UMN's filtration research.
- Reduced the round-trip time of obtaining global air quality data by 25% by caching reusable data from API in an implemented backend **SQLITE3** database.
- Integrated the frontend with **JavaScript** and the development of server with **Python Django** framework libraries.
- Leveraged knowledge in HTML, CSS, JavaScript, JSON, SQL, Python and Django

**Impresso Labs**  
*Software Developer*

- Worked with developers to build a Professional Networking Meetup application with global growing users.
- Completed full redesigns of existing web app to improve navigation and visuals.
- Introduced **Flutter** for Minimum Viable Product (MVP) mobile application developments.
- Managed the migration of existing **Laravel** web application onto **Flutter**
- Collaborated, discussed with the Founder to deliver valuable features meeting business and customer needs.
- Leveraged knowledge in Dart, Flutter, PHP and Laravel framework

**Student Software Developer**  
*Uni. Of Minnesota Civil Engineering Department*

- Developed a construction monitoring beacon in **MicroPython** using micro-controllers together with the GPS and LTE module.
- Reduced power consumption by 30% by introducing a lower power consumption IoT development board.
- Debugged and optimized automation programs while migrating from an existing prototype to a new board.
- Improved efficiency and readability of existing modules through refactoring and writing documentations.
- Leveraged knowledge in Python, MicroPython and Pycom.

**PERSONAL PROJECTS** <https://qihenglee.github.io>

### BoardCoding

- An application that can upload and compile code written on board or paper efficiently.
- Implemented OpenCV to pre-process the image and Tesseract for Optical Character Recognition
- GeeksforGeeks IDE is implemented to produce the output of the submitted code

### Guide Glasses for the Blind

- Built a pair of glasses powered with **Raspberry Pi** in **Python** for the visually impaired.
- Implemented ultrasonic sensors and infrared sensors to detect the surroundings.
- Applied GPS module for navigation and safety purposes with implementation of automated speech libraries.

## LANGUAGES

Java ; Python ; C ; C++ ; OCaml ; HTML ;  
CSS ; JavaScript ; PHP

## TECHNOLOGIES

React ; Flutter ; Django ; Node.js ; SQL ;  
Visual Studio Code ; Unix ; Raspberry Pi ;  
Arduino

## LEADERSHIP ROLES

**Taylors University Symphony**  
**Orchestra Concertmaster**

**Penang Philharmonic Orchestra**  
**Assistant Principal**

- Managed weekly sectionals with strict discipline by teaching them different techniques of playing different pieces.
- Enhanced collaboration among the players by hosting gathering and sharing event throughout the year.

### High School Robotics' Club President

- Increased the number of participants in the club by 47 members by performing robotic demonstrations to further STEM education in our school.
- Brought in the idea of teaching Arduino and other micro-controllers after school to promote STEM.

## AWARDS

**International Invention, Innovation and Technology Exhibition 2016**

- Gold Award (Guide Glasses for the Blind)

**International Exhibition for Young Inventors 2016**

- Silver Award (Guide Glasses for the Blind)