

# Hsuan Han(Edward) Lai

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## Summary

- A confident and creative programmer who is self-motivated in a quickly changing environment.
- Outstanding communication skills in team development or vendors.
- Strong skills in Mobile App Development, Python, Java, and Machine Learning.

## Education

2016- 19 **Pennsylvania State University** Bachelor of Science in Computer Science (B.A.) GPA 2.95  
2014- 16 **Shoreline Community College** Associate of Arts in Computer Science (A.A)  
2011- 14 **National Taichung Industrial High School** Electronic Engineering

## Experience

**Mandatory Military Service** *Marine Corps, Taichung, Taiwan*

Dec 2019- Mar 2020

**Software Developer Intern** *DigiWin Software Co., Ltd. , Taichung, Taiwan*

May 2018- Aug 2018

- Utilized Google Cloud service with industrial use management software.
- Design software for Android users, Implemented back-end database MySQL to provide visualized user interface.
- Developed more efficient algorithms to process all information sent by the PLC industrial system.
- [Android, Java, MySQL, JSON, Google Cloud IoT]

**WordPress Developer** *Quality Athletics Restaurant, Seattle, WA*

March 2016 - June 2017

- I developed a static webpage with Bootstrap framework for an organization specialized in the fundraising of food.
- Developed a website with high maintainability and scalability, forms utilizing PHP, and deployment of website and hosting.
- [HTML/ CSS/ Javascript, Bootstrap, PHP ]

**Electronic Technician** *Electronic Products Repair, Seattle, WA*

Sep 2013- May 2016

- I provided repair services for a wide range of product types.
- Problem-solving in hardware and software repair, such as PC, mobiles, tablets and OS system. Achieved over 150 pieces of electronic devices fixed

## Project

**HTML Forge** - AI Recognize user hand drawing and convert into code

- Developed custom Tensorflow model recognizes user's hand-drawing and Implemented OpenCV pre-processing unit to cluster and identify objects. Also Designed an algorithm to achieve better time and space complexity in the runtime of a web environment. Link: <http://htmlforge.com/>
- [ Python, Machine Learning, Tensorflow, OpenCV, Computer Vision]

**OP-1 Manager** - Portable file server for a digital synthesizer.

- Developed software/ hardware device. Capable of backup, upload and decrepit audio and synth patch files on the go.
- Involved Linux (8 sec) boot optimization on RSPi, circuitry design, Media file server via onboard WIFI, and UI design.
- Marketing, parts sourcing, and product production.
- Link: [https://github.com/adward/OP1\\_File\\_Organizer](https://github.com/adward/OP1_File_Organizer)
- [ Python, Shell, Linux, Flask, jQuery ]

**Compiler Design** - lexical, syntax, semantic analyzer that will compile and analyze C Minus Language.

- Developed in Java with Bison, JFlex, and YACC framework. With compiler optimization, static analysis, garbage collection, and error detection. Experienced with Context-Free-Grammar and Regular Expressions implementations •
- Link: [https://github.com/adward/minc\\_lexical-analyzer\\_syntaxChecker](https://github.com/adward/minc_lexical-analyzer_syntaxChecker)
- [ Java, C, Compiler, Bison, JFlex, YACC ]

## Leadership Experience

**Engineering Club President** *Shoreline Community College, Seattle, WA*

Sep 2014 - May 2015

**Founder and Instructor** *Creative Robot Design Club, Taichung, Taiwan*

Feb 2012 - April 2013

## Awards and Accomplishments:

1st Penn State Computer Science Capstone Design Conference (Graduation Project)  
1st Penn State The James A. Andrews Memorial Award for Excellence in Capstone Design Conference  
1st, American Society of Mechanical Engineering Sumo Robot  
1st, Race of Automated Computer Mouse (US nationwide)  
Gold Award, Finland SciFest Science Fairs, Finland  
4th, International Micro-Robot Competition, Japan