

Hsuan Han(Edward) Lai

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Summary

- A confident and creative programmer who is self-motivated in a quickly changing environment love challenging problems.
- Outstanding communication and leadership skills in team development or vendors.
- Strong skills in both **Python** and **Java**. Experiences in **Machine Learning**, and **Web Development**.

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, 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 Firebase database in backend, and provide visualized front-end user interface.
- Developed more efficient algorithms to process data sent from PLC industrial system.
- [Android, Java, JSON, Google Cloud Services]

Web 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, written PHP to process forms and requests, and deployment of website and hosting on Amazon AWS.
- [HTML/ CSS/ Javascript, Bootstrap, PHP, AWS]

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 [Penn State Capstone Awards]

- Trained custom TensorFlow model recognizes user's hand-drawing and Implemented OpenCV pre-processing unit to cluster and identify sketches. Also Designed an algorithm to achieve better time and space complexity in the web app environment. Custom CNN model achieved ~94% of Acc and ~78% of Rec.
- Link: <http://htmlforge.com/>
- [Python, Machine Learning, TensorFlow, OpenCV, Computer Vision]

OP-1 Manager - Portable file server for a digital synthesizer. [Personal Project]

- Developed software/ hardware device. Capable of backup, upload and decrepit specialized audio and synth patch files on the go.
- Involved Linux Kernel boot optimization on RSPi, Shell scripting, Hardware R&D, Circuitry design, Media file server written with Flask accessible via onboard WIFI and UI design.
- Product Marketing, electronic parts sourcing, manufacturing and product production.
- Link: https://github.com/adward/OP1_File_Organizer
- [Python, Shell, Linux, Flask, jQuery]

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