Hwai-Jin (Isaac) Peng

2021 NEW GRAD - SOFTWARE DEVELOPMENT ENGINEER / FULL STACK ENGINEER

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Education

University of Washington   *Seattle (WA), United States*

MASTER OF SCIENCE - ELECTRICAL & COMPUTER ENGINEERING (**GPA: 3.94**)   *Sep. 2019–Exp. Jun. 2021*

- Selected Courses: AI for Engineers, Machine Learning for Big Data, Computer Vision

National Taiwan University   *Taipei, Taiwan*

BACHELOR OF SCIENCE - ELECTRICAL ENGINEERING (**GPA: 3.86**)   *Sep. 2014–Jan. 2019*

- Undergrad Research Assistant @ Vision & Learning Lab
- Teaching Assistant @ Deep Learning for Computer Vision

Skills

Programming	Python, C++, JavaScript, Java, MATLAB	**Development Cycle**	Git, Bash, Multithread
ML & CV Toolkits	Pytorch, Tensorflow, OpenCV, nltk	**Backend Framework**	Flask, Django
Cloud Platform	Amazon Web Services (AWS), Google Cloud	**Data Analysis**	MongoDB, Spark, SQLite

Work Experiences

Intel Corporation - CCG Chrome Multimedia Team   *Taipei, Taiwan*

CHROME SOFTWARE ENGINEER INTERN   *July 2020–Aug. 2020*

- Chromebook Test Automation Framework
  - Built a **RESTful Flask** application for test automation of Chromebook audio (SOF) and graphics (GFX) drivers.
  - Handled **multi-threaded** test suites in the background and updated their status periodically.
  - Reduced test cycle time by over 80% by integrating distinct test suites and redirecting results to web UI in real time.
- Sound Open Firmware Integration Manager
  - Designed a Linux command line simulator for advanced users to configure the deployment of firmware and topology.
  - Sanitized raw user inputs of subprocesses to pass the security scan of **Bandit** and **Checkmarx**.
  - Refactored the automation process of building SOF for distinct Intel CPU microarchitectures.

BravoAI Co., Ltd.   *Taipei, Taiwan*

BACKEND SOFTWARE ENGINEER INTERN   *Oct. 2018–Jan. 2019*

- Utilized **MongoDB** to build **RESTful web services** to manage policies. Cooperated with one of the biggest insurance companies in Taiwan.
- Slashed 15% cost and time by dealing with over 1,000 insurance subscriptions and claims electronically every day.
- Proposed collecting customers' e-signatures for few-shot verification of identification to prevent identity theft.

National Taiwan University - Vision & Learning Lab   *Taipei, Taiwan*

UNDERGRADUATE RESEARCH ASSISTANT   *July. 2018–Apr. 2019*

- Published paper as the first author: "Element-Embedded Style Transfer Networks for Style Harmonization" in BMVC 2019.
- Introduced a pair of global/local discriminator to eliminate the inharmonicity between element and image with style of interest.
- Surpassed the state-of-the-art methods in terms of speed (3 order faster), while yielding comparable satisfactory output images.

Selected Projects

Telenav, Inc. - An Incremental Learning Based Spell Checker for Local Search User Queries   *Seattle, Washington*

UW ECE 598 - ENGINEERING ENTREPRENEURIAL CAPSTONE   *Jan. 2020–Jun. 2020*

- Designed an address spell checker for English spell-checking and correction.
- Applied an incremental learning-based technique to provide updates to the learned model without further data preprocessing.
- Collected and built an evaluation dataset consists of three types of common misspellings.
- Achieved over 80% accuracy and < 40ms inference time on word level.