Shang-Wei Hung (Alan)

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Seeking **2020 Full-time** in Software Engineer/ Machine Learning Engineer
Currently in San Diego, CA

SKILLS

Programming Language: Python, C/C++, Java, JavaScript, Node.js, HTML, CSS, R, MATLAB
Miscellaneous: PyTorch, TensorFlow, Django, Node.js, React, MySQL, MongoDB, SQLite, Pandas, Linux, Git

PUBLICATION

"Incorporating Luminance, Depth and Color Information by a Fusion-based Network for Semantic Segmentation," in *IEEE International Conference on Image Processing, 2019.*

EDUCATION

University of California San Diego (UCSD) *La Jolla, CA*
M.S. in Electrical and Computer Engineering, Machine Learning and Data Science *Sep. 2018 - June 2020*

- **Current GPA: 3.75/4.0**
- Courses: Statistical Learning, Machine Learning for Image Processing, Object-Oriented Programming in C++, Programming for Data Analysis, Recommender System and Web Mining, Computer Vision

National Chiao Tung University (NCTU) *Hsinchu, Taiwan*
B.S. in Electrical Engineering and Computer Science *Sep. 2013 - June 2017*

- Rank: 3/28; Overall GPA: 4.05/ 4.30, 89.87/ 100

WORK EXPERIENCE

Software Engineer Intern *July 2019 - Aug. 2019*
Trend Micro *Taipei, Taiwan*

- Achieved 3 kinds of **dashboards on Splunk** for monitoring the CPU, memory usage, local storage usage, the health of thread, etc. in each endpoint.
- Developed automatic alert system via slack using anomaly detection in Splunk Machine Learning toolkit.
- **Expedited problem-solving time about 30%** by my Splunk App.

Research Assistant *June 2018 - Oct. 2018*
Communication Electronics and Signal Processing Laboratory, NCTU *Hsinchu, Taiwan*

- Investigated **autonomous driving semantic segmentation model** using RGB and Depth information.
- **Achieved 71.3% mIoU** on the Cityscapes dataset **with 3.3% improvement over baseline.**

PROJECTS

Airbnb New User Bookings Challenge on Kaggle |*Python* *Apr. 2020*

- **Improved model performance by 11%** by conducting data cleaning and data engineering, imputing missing values.
- Achieved **top 11% over 1100+ competitors** using **XGBoost**.

Hsinchu Foodie Blog |*Node.js, Express.js, MongoDB, HTML, CSS, Bootstrap* *Mar. 2020*

- Developed **RESTful API** with searching engine, adding new restaurant and edit restaurant information features.
- Linked application with a **NoSQL database** designed by myself using **MongoDB**.

Shopping Cart API |*Node.js, Express.js, MySQL* *Mar. 2020*

- Developed server side application with member register/login/make order/edit order/order confirmation email service.
- Designed **MySQL database** schema with member, product and order features.
- Utilized **Postman** to fully examine functionalities.

Goodreads Rating and Read Prediction Challenge on Kaggle |*Python* *Nov. 2019*

- **Improved about 6% accuracy** by implementing **collaborative filtering** of user and book similarities.
- Formulated the task to pairwise preference prediction solved by **latent factor model (SVD algorithm)**.
- **Achieved top 21%/ 28%** among 423/ 847 competitors on Rating/ Read Prediction.

Image Descriptor |*Python, PyTorch* *June 2019*

- Addressed objects missing issue in captions by implementing CNN-LSTM networks and **attention mechanism**.
- **Achieved BLEU-4 score of 0.1968** on the MS COCO dataset.

Domain Adaptation on Different Weather Road Scene Segmentation |*Python, PyTorch* *Mar. 2019*

- Incorporated a domain classifier into two-stream FCN8s to align cross-domain features.
- **Achieved 5-10 % mIoU improvement** in the SYNTHIA dataset.

Intelligent Fundus Image Recognition Assistant System |*MATLAB, C* *Feb. 2016*

- Built an image quality assessment model to eliminate poor training data enhancing detection accuracy.
- Utilized template matching and k-means to detect optic disc and macula.