Shang-Wei Hung (Alan)

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Seeking **2020 Full-time** in ML/DL, Software Development

SKILLS

Area of Interest: Machine/ Deep Learning, Computer Vision, General Software Development
Programming Language: Python, C/C++, MATLAB, R, JavaScript, Java, HTML, CSS
Miscellaneous: PyTorch, TensorFlow, Sklearn, OpenCV, Pandas, MySQL, SQLite, Linux, Git, Flask, Splunk

PUBLICATIONS

"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 - March 2020*
- **Current GPA: 3.75/4.0**
- Courses: Statistical Learning, Machine Learning for Image Processing, Programming for Data Analysis Sensing and Estimation in Robotics, 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

University of Illinois, Urbana–Champaign (UIUC) *Champaign, IL*
Exchange student in Electrical and Computer Engineering *Aug. 2016 - Dec. 2016*

WORK EXPERIENCE

Software Engineer Intern *(DevOps)* *July 2019 - Aug. 2019*
TrendMicro *Taipei, Taiwan*
- Designed 3 kinds of dashboards on **Splunk** for monitoring the CPU, memory usage, local storage usage, the health of thread, etc. in each endpoint.
- Utilized Splunk Machine Learning toolkit to automatically make alert via interior slack channel.
- Published Splunk App for interior bug reporting to reduce problem-solving time and optimize team productivity.

Research Assistant *June 2018 - Oct. 2018*
Communication Electronics and Signal Processing Laboratory, NCTU *Hsinchu, Taiwan*
- **Autonomous Driving Semantic Segmentation Model** Design and Implementation.
- Developed a framework that utilizes both RGB and Depth information provided from Kinect camera.
- **Achieved 71.3% mIoU** on the Cityscapes dataset **with 3.3% improvement over baseline.**

PROJECTS

Goodreads Rating and Read Prediction Challenge on Kaggle |*Python* *Nov. 2019*
- Adopted **collaborative filtering** by exploiting user and book similarities.
- Utilized **latent factor model (SVD algorithm)** to maximize pairwise preference prediction.
- Ranked top 21%/ 28% among 423/ 847 competitors on Rating/ Read Prediction.

Random Straws Drawer System Web Application |*Python, Flask, SQLite, HTML, CSS* *Aug. 2019*
- Proposed meeting speaker straws drawer system with adding new member feature/ admin-login feature.
- **Designed SQL database schema** and linked with Flask REST API.
- Utilized Jinja2 template engine to enhance code readability and simplify functions augmentation.

Image Descriptor |*Python, PyTorch* *June. 2019*
- Utilized CNN-LSTM networks and **visual attention mechanism** to generate captions without objects missing problem.
- 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 with shared weights.
- **Aligned cross-domain features** and achieved **5-10 % mIoU improvement** in the SYNTHIA dataset.

Simultaneous Localization and Mapping & Texture Mapping |*Python* *Feb. 2019*
- Fused and filtered data from odometry, IMU and LIDAR scans localizing household robot **using partical filter**.
- Projected RGBD information from Kinect to build 2D map using calibration parameters.