Heiru **Wu**

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Skills

Programming languages: Proficient in Python, Previously used Java, C++
Tools: Pytorch, TensorRT, XGBoost, scikit-learn, OpenCV, Git, Luigi, AWS, Android

Experience

Aegis Technology *Phoenix, AZ*
Founding Engineer *Mar 2022 – Present*
- Design and build fire hazard machine learning PoC for large scale semiconductor fab plant

Careplus.ai *Hsinchu, Taiwan*
Chief Technology Officer *Feb 2021 – May 2022*
- Designed and developed a Machine Learning enabled home-caring system which introduced intelligent ambient awareness powered by our modularized inference components, delivering features that prevents 90% or more of the accidents and continuously adapting to current environment and new behaviors.
- Developed custom MLOps framework for automation pipeline to perform self-annotation, active-learning, performance evaluation and model deployment to cut down 90% of the human resources and maintain 99% of system availability and reliability

Prof. Min Sun, Tsing Hua University *Hsinchu, Taiwan*
Research Assistant *July 2020 – Feb 2021*
- Researched and developed modularized Machin Learning inference components including object detection, object tracking, pose-estimation, action-recognition and person re-identification, which can speed up task-specific domain adaptation up to 80% and cut down 50% of development time.

Industrial Technology Research Institute *Hsinchu, Taiwan*
Software Engineer *July 2019 – July 2020*
- Customized SOTA deep learning backbone networks including Mobilenet, Darknet-53 and CSPNet, combined with SSD and Yolov3/v4 detection network and object tracking algorithms, deployed an object detection system for self-driving vehicles with above 90% intra-class averaged mAP and f1 score.

Prof. Sanjib Sur, University of South Carolina *Columbia, SC*
Research Assistant *Sep 2018 – May 2019*
- Researched and designed a DNN steering angle prediction model built with Tensorflow framework, we introduced novel convolutional blocks to learn and extract additional high dimensional features with 20% faster model forward time and 10% higher mAP over benchmark dataset.

California Partners for Advanced Transportation Technology *Richmond, CA*
Research Intern *June 2018 – Sep 2018*
- Developed tools to help construct 3D pointcloud vector map for autonomous vehicle's SLAM algorithm and route planning while utilizing PPP GPS to correct the margin of error to achieve 90% accuracy.

Education

University of South Carolina *Columbia, SC*
MS in Software Engineering *Aug 2017 – May 2019*
GPA: 3.9

Chang Gung Unversity *Taoyuan, Taiwan*
BS in Electrical Engineering *Sep 2010 – Jan 2016*
GPA: 3.4