Jiayi Wei

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Education

Beijing University of Posts and Telecommunications — Expected to graduate on Mar. 2019
Candidate for Master of Science in Electrical Engineering

Beijing University of Posts and Telecommunications — Graduated on Jul. 2016
Candidate for Bachelor Degree of Engineering

Academic Experiences

Unsupervised Anomaly Detection for Traffic Surveillance — Feb. 2018 – Apr. 2018

My proposed method ranks in the 2nd in the Nvidia AiCity Challenge track-2, CVPR Workshop 2018

- Designed a system which could work in various scenes without special modification based on background modeling
- Using Background modeling, all moving normal vehicles are removed from the background frames and all stalled vehicles become parts of background
- Trained ResNet50, Faster-Rcnn with triplet loss and VGGNet for similarity comparison, vehicle detection and vehicle classification respectively
- Designed and modified a decision module to obtain the final result based on bounding boxes.
- Ranked in the 2nd with 0.81 F1-score and 10.2 RMSE in the Challenge track-2

Plate License Recognition Based on Segmentation and Conv-LSTM — Nov. 2017 – May. 2018

- Designed a full Conv network based on ResNet for plate license segmentation on wild vehicle images
- Using respective transformation to obtain the rectified rectangle plate license
- Designed a Conv-LSTM to recognition letters on rectified plate license end-to-end
- Achieved more than 99% recognition accuracy from vehicle images to license plate number with fast speed

Traffic Signs Detection in Wild — Jun. 2017 – Oct. 2017

- Annotated around 10K+ bounding boxes on 5k+ images captured in various sences.
- Trained a Faster-Rcnn detection model with 80% labeled data
- Achieved 97.4% accuracy on evaluation data
- Completed a traffic sign detection system on Windows using QT and the detection model on Linux server

Working Experiences

Computer Vision Engineer, Samsung Research(Beijing) — Aug. 2016 – Dec. 2016

Internship, Computer Vision Team

- Participated in lane detection project implementation
- Optimized algorithm performance and reduce detection time

Social Experiences

Volunteered at WeiShanZhuang Nursing Home — Nov. 2016 – Jul. 2017

Volunteered at National Library of China Reader Service Center — Sep. 2014 – Jan. 2014