Yangyun Li

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Applied position: Software Developer Intern

Education Background

University of Electronic Science and Technology of China   *Sept 2015- Jul 2019*

Glasgow College UESTC, major in Electrical & Electronic Engineering

Accumulative GPA: 3.74/4.0

Related main courses: Introductory Programming, Calculus, Digital Signal Processing

Honors: Winner of the Freshman Scholarship of the University, 2015

Northwestern University

Current GPA: 3.90/4.0   *Sept 2019- Jul 2021*

McCormick School of Engineering and Applied Science, major in EECS

Related main courses: Computer Vision, Machine Learning, Computational Photography

Intern/Work Experience

Comba Telecom System Holding Co., Ltd   *Aug 1ˢᵗ- 31ˢᵗ, 2017*

Engineer Assistant

● Studied the use of telecommunication devices and did in-field testing, learned the principle of WLAN

● Tested the WLAN signal strengths in underground parking and residential district, debugged the devices

Sichuan Energy Internet Research Institute, Tsinghua University   *Mar–Apr, 2019*

Tester

● Be in charge of testing products' various functions such as its parameter feedback and signal transmission.

● Write Python scripts to automatically and repeatedly test the products to ensure its quality and full function.

Research and Projects

Congestion Detection in Underground Parking Base on C++ and OpenCV   *Jul – Aug, 2018*

● Designed a program that can detect the parking's real-time congestion with the date extracted from the camera

● Used C++ and OpenCV to process images and studied algorithms of vehicle recognition & semantic segmentation

● Tested relevant procedures in C++ environment and evaluated if they are beneficial to congestion detection

● Optimized the program, enabling it to fit the practical use

The design of an intelligent vehicle based on prescribed routes   *Mar- Jun, 2018*

● Researched the algorithms that can achieve color and route recognition, used C++ and OpenCV to process images

● Tested the algorithms in OpenCV and did adjustments according to actual situations

● Embedded the program into the microcontroller called raspberry pi and did in-filed measurements and debugs

Smart eraser   *Sep -Nov 2019*

● Wrote a program to simulate eraser effect in video to erase handwriting following the motion of eraser.

● Used target tracking based on bounding box and matching criteria such as normalized cross correlation to track the movement of eraser.

● Utilized texture synthesis with dynamic programming to recover the erased background similar to original one.

Vehicle detection   *Sep -Nov 2019*

● Extracted features from each vehicle and non-vehicle frame in video using HOG method for further training.

● Trained a SVM classifier based on HOG features and another YOLO network is trained simultaneously including feature extraction and classification.

● Compared the performance of two different methods for their error rates.

● Matched two sets of point cloud data including geospatial information from a certain area.

● Applied ICP algorithm for the match process and visualize the final results.

Data Point Cloud Registration *Mar -Jun 2020*

● Matched two sets of point cloud data including geospatial information from a certain area.

● Applied ICP algorithm for the match process and visualize the final results.