

EDUCATION

Ph.D. (current) in Electrical and Control Engineering, National Chiao Tung University (NCTU), Taiwan.

B.S. in Electrical Engineering and Computer Science Undergraduate Honors Program, National Chiao Tung University (NCTU), Taiwan.

PROJECTS**1) Outdoor Navigation for People Blind and Visually Impaired:**

Advisor: Prof. Hsueh-Cheng Nick Wang

Summer, 2016

The main notion of this project is to build a device that assist people who are blind and visually impaired while he/she is walking. A depth camera captures a disparity map as input, then followed by point cloud algorithms calculated in embedded systems and last, outputting vibration signals to the haptic belt. The system has several functionalities for instance, lane following, wall following, household object detection.

2) Smart Coffee Cup (2015 ARM DESIGN CONTEST 1st place):

Fall, 2015

This smart coffee cup is prototype for coffee perfectionists. It is capable to detect the flavor of the coffee including sweetness, how much cream, etc. Unlike common methods, it only grabs data from the tiny electrodes in the cup. It heavily uses signal processing, and SVM and other ML algorithms to analyze every factor in the coffee. A math model is built to simulate the cup of coffee.

3) Vision-based multi-scooter velocity-measuring system:

Spring, 2014

The purpose of this project is to build a mobile system that is capable of simultaneously measuring the velocity of multiple scooters. It is based on computer vision and is invulnerable to various lighting conditions. And since it is mobile, I can mount it everywhere I want to. Test results held in the scooter-path of the campus were great.

ACTIVITIES

Founder and president of Maker club (Makereal Labs) at NCTU

Cofounder of a Startup called flipMED in Taiwan. Won several competitions and prizes summing up to 70000USD. Our product is a hardware and service for Mobile Health.

SKILLS

Programming Language: C/C++, Python, Matlab, Java

Middleware for Robotics: Robot Operation System (ROS), LCM

Libraries and Toolbox: OpenCV, Point Cloud Library (PCL), CUDA

Other Skills: 3DsMAX, 3D Printing and modeling

RELEVANT**COURSEWORK**

Digital Image Processing, Machine Learning and Pattern Recognition, Embedded Systems.

Operating Systems Design and Implementation, Parallel Programming, Robotic Vision.