

Li-Kang (Tony) Weng

Tel: 972-626-9600 E-mail: eqttonytony@gmail.com Website: escrowdis.tw LinkedIn: linkedin.com/in/lkw-tw

WORK EXPERIENCE

- Software Development Engineer**, Amazon Web Services, Inc. Seattle, USA
06/2021 - present
- Contribute EC2/Spot Fleet APIs to provide the best customer experience
 - Automate frequently used operations to save significant time for the team
- Software Development Engineer Intern**, Amazon Web Services, Inc. Dallas, USA
05/2020 - 07/2020
- Added CloudWatch Events to AWS EC2 Fleet to let customers be aware of the states of their fleets and take actions to fulfill their business demands
- Research Assistant**, National Taiwan University Taipei, Taiwan
03/2019 - 06/2019
- Built a tracked robot using ROS (Robot Operating System) for surveillance on a chicken farm and the information and the manipulation of the robot were visualized on GUI
- Software Engineer**, HTC Corp. Taipei, Taiwan
01/2017 - 07/2018
- Developed real-time **visual-inertial SLAM** algorithm using C++ on ARM platform
 - Designed GUI and tools for real-time data visualization and KPI measurement to eliminate tedious labor and quantitate tracking performance

TECHNICAL SKILLS

Programming C++, Java, JavaScript, Python, Git, AWS, OpenCV, Unity, AutoCAD
Robotic Components ROS, IMU, stereo camera, Nvidia JETSON TX2 Developer Board, Arduino

EDUCATION

- The University of Texas at Dallas** Dallas, USA
05/2021
Master of Science in Computer Science
- Udacity** Taipei, Taiwan
02/2018
Nanodegree in Self-Driving Car Engineer
- Projects** Vehicle Tracking, Lane Line Detection, Traffic Sign Classification, Driving Behavior Cloning
- National Taiwan University (NTU)** Taipei, Taiwan
09/2015
Master of Science in Bio-Industrial Mechatronics Engineering (BIME)
- Dissertation** Sensor Fusion of Stereo Vision and Radar Systems for Vehicle Safety Application
- Bachelor of Science* in BIME 06/2013
- Topic** Quantitative Evaluation of the Floral Shape Variation in *Sinningia Speciosa* Domestication

RELEVANT PROJECTS AND RESEARCH

- Sensor Fusion Project**, Biophotonics and Bioimaging Laboratory (BBLab), NTU 05/2013 - 09/2015
- Constructed **sensor fusion based** vehicle safety real-time system capable of obstacle detection, tracking and collision avoidance algorithms using **stereo vision** and **millimeter-wave radar sensor**
 - Eliminated measurement error of depth information from 2.4% to **0.7%** using fused information
 - Enhanced obstacle matched rate from 82.1% to **89.8%** using fused information
 - Accelerated **2.8** times in the correspondence matching method using CUDA with OpenCV
- The 9th Utechzone Machine Vision Prize**, Utechzone Inc. 02/2014 - 08/2014
- Awarded **2nd prize** in the overall competition and developed fall detection algorithm including background removal, feature extraction, object tracking, and motion detection under complicated scenarios (light variation, overlap)
- Floral Shape Variation Study**, BBLab, NTU 08/2012 - 02/2014
- Accelerated process speed** and **eliminated measurement error** by developing a semi-automatic program with GUI using image processing methods for flower landmark acquisition
 - Analyzed shape variation of *Sinningia speciosa* from landmarks identified on 2D images
- Advanced Technology Project in Vehicle Safety: Intelligence and Human Factors**, ARTC 05/2013 - 01/2014
- Refactored obstacle matching algorithm to optimize performance by speed-up around **30%**
 - Eliminated measurement error by optimizing camera calibration on stereo vision
 - Analyzed **path planning** algorithms to provide a more realistic solution
 - Designed GUI with concise information for users easy to understand environmental information
- The 8th Utechzone Machine Vision Prize**, Utechzone Inc. 01/2013 - 08/2013
- Implemented feature of face recognition method and analyzed the performance with **78%** successful rate

SELECTED PUBLICATIONS

Ta-Te Lin, **Li-Kang Weng** and An-Chih Tsai. 2014. Object Tracking and Collision Avoidance Using Particle Filter and Vector Field Histogram Methods. Paper presented at ASABE. Paper No. 1906189, Montreal, Quebec City, Canada.