ZHI YAN (IAN) LEONG

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RESEARCH INTERESTS   *Autonomous Vehicles, Artificial Intelligence, Signal Processing, Advanced Automation & Robotics*

SUMMARY

- Motivated **Electrical Engineering** graduate seeking *career opportunities* in software/hardware to gain hands-on experience.
- Life-long learner to push limits with work history in automotive and drones.

EDUCATION

Udacity Nanodegree:

- Self-Driving Car Engineer   *» In Progress «*
- Intro to Self-Driving Car   *» June 2020 «*

Bachelor of Science:

- Electrical Engineering   *» April 2020 «*
  - **GPA: 3.8**
  - Western Michigan University, USA
- American Degree Transfer Program   *» July 2017 «*
  - **GPA: 3.68**
  - Sunway University, Malaysia

SKILLS

Languages:

- English
- Malay
- Mandarin
- Cantonese

Technical:

- Python
- OpenCV
- MATLAB
- LTSpice
- Oracle CrystallBall
- C++
- Arduino
- AudioWeaver
- QGroundControl
- C
- Raspberry Pi
- SigmaStudio

EXPERIENCE

Team Pegasus, **Indy Autonomous Challenge**   *» May 2020 – Present «*

- Participating in the world's first autonomous head-to-head race at speeds of up to **200mph** at *Indy Motor Speedway*.
- Applying concepts such as Robot Operating System (ROS) and CARLA simulator in Linux environment.
- Developing in Python and C++ to catalyze autonomous vehicle technologies.

Senior Design Capstone Project, **Electrical & Computer Engineering, WMU**   *» August 2019 – April 2020 «*

- Developed solutions of autonomously tracking and landing on a moving platform within a **3-mile range**.
- Utilized publicly available SDKs such as PX4 and QGroundControl to design and simulate an UAV in a C++ environment.
- Learned AT communication protocols in Arduino IDE, controlled PWM motors, I2C ports for serial communication, and various frequency transceivers with iSikRadio, HC12, ACCST, and ACCESS protocol to support project needs.

Summer Intern Researcher, **Product Development R&A, Ford Motor Company**   *» May 2019 – July 2019 «*

- Evaluated MEMs microphones on STM32F769 and ADAU1467 for Automated Speech Recognition (ASR) and voice quality for accuracy and integrity to identify and resolve problems in a clean/noisy vehicle environment.
- Administer ASR and voice quality tests to research and apply multi-microphone beamforming in AudioWeaver and SigmaStudio.
- Conducted benchmarking process for ASR performance using Squadriga to carry out statistical analysis in voice recognition engine in batch mode with success of proof of concepts with digital signal processing concepts.

Office Manager, **Residence Life Department, WMU**   *» August 2018 – April 2020 «*

- Maintained impeccable office organization and professionalism to about **400 students** in the residence hall.
- Provided clerical support for hall managers with administrative tasks such as answering phones, creating documents, and filing.

Peer Mentor, **Success @ WMU**   *» August 2018 – April 2019 «*

- Facilitated **1:1** or group mentoring sessions for up to **40 students** focused on various issues to help groups and individuals.
- Served in a leadership role and created programs to promote independent functioning, embracing student success among peers.

CAMPUS & COMMUNITY INVOLVEMENT

Tau Beta Pi, Engineering Honor Society

- Strived for success in academics by ranking top **1/8 juniors** on top **1/5 of seniors** in engineering.

Racquetball at WMU

- Increased exposure for the sport and membership by introducing and helping other players enjoy the sport.

Tau Beta Pi, Engineering Honor Society

- Provided discussion topics such as global engagement and culture as a lifelong learning institute to **500 students.**