

Yi Chen

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Professional Experience

Algorithm Developer

Aptiv

Jul 2021~Present

- In charge of development of L2+ ADAS features including Driver Monitoring, Threat Assessment, Motion Prediction
- Delivered General Safety Regulation Drowsy Driver and Attentive Warning compliance feature as developer lead
- Utilized Simulink and MATLAB to design complex state machines delivering embedded software meeting MISRA C
- Designed Python scripts for performing event extraction over large datasets for code debugging and improvements
- Analyzed and optimized computationally expensive algorithms in real-time OS environment to meet ECU spec
- Established and maintained testing environments including Gtest in C++ and software-in-the-loop resimulation
- Communicated closely with stakeholders to ensure requirement satisfaction and document's ASPICE compliance
- Supported customer demo in a fast-paced environment, delivering tailored software releases per feedback
- Conducted in-vehicle testing and data collection using Vector products for debugging and performance tuning

Mechanical intern

Robert Bosch

Sep 2018~Feb 2019

- Creating engineering graphs and utilizing 3D printer to create mock-up for design inspection for manufacturing
- Conducted reliability tests during security camera development stage following IK and IP commercial standards
- Coordinated tasks between mechanical design team and product testing team for design validation and feedback

Technical Skills

- **Programming:** Python, C++, MATLAB, Simulink, Linux, ROS, Git, Google Test
- **Design:** AutoCAD, AutoLISP, ANSYS, Pro/e (Creo), Inventor, SOLIDWORKS, LabView
- **Manufacturing:** 3D-Printing, Laser Cutting, CNC, Soldering, Welding, Lathe, Aluminum Casting
- **Certificate:** JLPT N1

Education

Arizona State University

Tempe, Arizona

AUG 2019~MAY 2021

- *Master of Science in Robotics and Autonomous System*

National Taiwan University

Taipei, Taiwan

SEP 2014~JUN 2018

- *Bachelor of Science in Mechanical Engineering (BSME)*

Research Experience

Design informatics Lab, ASU

Jan 2020~Present

Masters Researcher

Advisor: Prof. "Max" Yi Ren

- Researched in game-based human-robot interaction in Autonomous Vehicles, improving safety and efficiency
- Conducted simulation experiments with Python on Bayesian inference with Pytorch Neural Network value function
- Proposed the effectiveness and robustness of human-aware empathetic agents in incomplete information games

Publications

- **Yi Chen**; L. Zhang; T. Merry; S. Amatya; W.L. Zhang; Y. Ren, "When Shall I Be Empathetic? The Utility of Empathetic Parameter Estimation in Multi-Agent Interactions", *IEEE ICRA 2021*.

Academic Projects

NTU autonomous Racecar project

Summer 2018

- Developed Autonomous navigation system on Nvidia TX1 Linux platform, equipped with LIDAR, camera and IMU
- Enhanced equipment safety and improved battery life for longer test duration with mechanisms and circuits design
- Utilized OpenCV and YOLO for onboard camera object detection along with LIDAR for navigation and mapping test

NTU Automated Ground Vehicle Body Design

Spring 2018

- Conducted mechanical design process from mock-up, verification to coordination with manufacturer for the robot
- AGV was showcased at 2018 Taipei International Information Technology Show with our designed exterior