

Yi Chen

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Professional Experience

Algorithm Developer	Aptiv	Jul 2021~Present
<ul style="list-style-type: none">• 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-pace 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• <i>Master of Science in Robotics and Autonomous System</i>		
National Taiwan University	Taipei, Taiwan	SEP 2014~JUN 2018
<ul style="list-style-type: none">• <i>Bachelor of Science in Mechanical Engineering (BSME)</i>		

Research Experience

Design informatics Lab, ASU	Jan 2020~Present
Masters Researcher	Advisor: Prof. "Max" Yi Ren
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• 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	