

Yi Chen

+1-480-577-3902 | yichenn37@gmail.com | [LinkedIn](#) | [GitHub](#)

Professional Experience

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| Algorithm Developer | Aptiv | Jul 2021-Present |
| <ul style="list-style-type: none">Codebase Development<ul style="list-style-type: none">Developed safety-critical threat assessments for AEB, ACC, LKA.Maintained component SIL and data analysis tools for design iteration to ensure 0% performance degradation.Optimized motion prediction algorithm, saving memory usage and reducing runtime by 40% on target ECU.Established GTest as a transition from model-based development and achieved 90% branch coverage.Represented cross-team functions in client demos for scenario-based tests.Model-based Development<ul style="list-style-type: none">Led development of GSR 2.0-compliant Drowsy & Inattentive Driver Warning features.Authored SWE.1 document by translating functional safety specifications and system-level requirements into work products compliant with ISO 26262.Tuned performance on customer pre-launch validation road trips utilizing Vector CAN products. | | |
| Mechanical Engineer Intern | Bosch | Sep 2018-Feb 2019 |
| <ul style="list-style-type: none">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:** C++, C, Python, Linux, ROS, Git, CMakeList, MATLAB, Simulink, Google Test, Coverity
- Tools and Systems:** Polarion, Jenkins, WSL, VSCode, VMWare, Vector tools, ISO 26262, Lauterbach
- Certificate:** JLPT N1

Education

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| Arizona State University | Tempe, Arizona | Aug 2019-May 2021 |
| <ul style="list-style-type: none">Master of Science in Robotics and Autonomous System | | |
| National Taiwan University | Taipei, Taiwan | Sep 2014-Jun 2018 |
| <ul style="list-style-type: none">Bachelor of Science in Mechanical Engineering (BSME) | | |

Research Experience

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| Design informatics Lab, ASU | | Jan 2020-May 2021 |
| 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 with controlled agents using 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. Amatyia; 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

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| 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.Experience product cycle from product concept, supplier quoting, design specification, prototyping, reporting. | |