Max Chen

ckyb63@gmail.com | chen3901@purdue.edu | (213) 246-7020 | linkedin.com/in/maxchen-cky

Education

Purdue University, West Lafayette, IN   Aug 2021 – May 2025
- **Degree:** Bachelor of Science in Robotics Engineering Technology
- **Minor:** Electrical Engineering Technology
- **Honors:** Dean's List & Semester Honors (2022-2025)

Experience

Audio Engineering Research Assistant, SEAT Lab, Purdue University – West Lafayette, IN   Aug 2024 – Present
- Developed Python automation scripts for audio impedance measurements, improving data collection efficiency
- Conducted research on acoustical loads and electrical impedance relationships; contributed to publication

Engineering Intern, Purdue Applied Research Institute – Crane, IN   May 2024 – Aug 2024
- Assembled and optimized precision wafer probe station for semiconductor testing
- Designed custom controller hardware/software with computer vision-based gesture control

Teaching Assistant / Laboratory Instructor, Purdue University – West Lafayette, IN   Aug 2024 – Dec 2024
- Facilitated hands-on laboratory sessions for 25+ students in ECET 327 (Instrumentation and DAQ Design)
- Taught and provided support in NI LabVIEW programming
- Provided detailed feedback on lab reports and assignments, ensuring mastery of course exercises

Robotics Research Assistant, HIRoLab, Purdue University – West Lafayette, IN   Sept 2022 – Feb 2025
- Designed and fabricated 100+ STEM-education robotic kits using ROS and advanced digital fabrication
- Developed EMG muscle sensor systems for safe human-robot interaction in educational settings
- Created comprehensive K-12 robotics curriculum and prosthesis adapters for biomechanics research

Publications

Using Speakers as Sensors: Detecting Acoustic Loads with Dense Neural Networks and Impedance Features   2025
Max Chen, Noori Kim, Keisuke Alexander Nakamura
Extended Abstract • 10.5703/1288284317876

Nuplator: A Comprehensive Robotic Arm System for K-12 Education   2025
Andres Torres, Ahmed Soliman, [7 other authors], *Max Chen*, et al.
10.1007/s41686-025-00102-9

Projects

PPE A.I. Vending Machine   Senior Capstone
- AI-powered vending machine using YOLO object detection for PPE compliance monitoring
- Developed with Python, PySide6, OpenCV, and Nvidia Jetson Orin Nano for edge AI processing

Autonomous Rally Car Race   Course Project
- Achieved 48-second lap time with autonomous navigation using ROS, LIDAR, and PD control
- Implemented wall-following algorithm and waypoint navigation with AMCL localization

Technical Skills

Programming: Python, C, MATLAB, Java, LabVIEW
CAD: SolidWorks, Siemens NX, Autodesk Inventor
Robotics: ROS, OpenCV, YOLO, Computer Vision
Embedded: Arduino, Raspberry Pi, Nvidia Jetson
Digital Fabrication: 3D Printing, Laser Cutting, Soldering, KiCad, NI Multisim