

Chen-Shi Liou

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EDUCATION

University of Michigan

Expected 2029

Bachelor of Science in Engineering, Electrical Engineering | GPA: 3.84

Novi High School, Michigan | GPA: 4.08

Kang Ming Senior High School

ENGINEERING EXPERIENCE

MRacing | Formula SAE Electric

Jan 2026 – Present

Tractive System Status Indicator Assembly and Electrical Integration

- Assembled and debugged the Tractive System Status Indicator (TSSI) PCB; wired and measured the motor-controller-to-amber-light connection for ready-to-drive status indication.
- Packaged indicator circuits in a 3D-printed enclosure, modifying the housing and applying epoxy and rubber coating to protect the assembly from water exposure.
- Conducted layout and shell redesigning by collaborating with the chassis-aero branch on component integration to improve vehicle aerodynamics.
- Assembled front and rear power distribution modules, reworked harnesses, and prepared low-voltage spares to support vehicle assembly and maintenance.

MRover | Michigan Mars Rover

Sep 2025 – Mar 2026

Power Distribution Board Design and Assembly

- Collaborated on power distribution motherboard design and PCB layout in Altium, supporting integration of the rover's power distribution electronics.
- Soldered and debugged the motherboard and daughtercards; identified excessive heating during daughtercard testing, flagging a hardware issue for further troubleshooting.

PROJECTS

Image Classification with CLIP | Coursework

Sep 2025 – Present

- Led team coordination through meetings, communication, deadline tracking, and integration of project contributions; identified gaps in work and helped resolve them.
- Developed PyTorch linear classifiers and contributed Python code for a CLIP-based image classification project; the team recorded 95.2% accuracy on 10,000 evaluation images.
- Evaluated two CLIP encoders with 25,000 and 40,000 training images, using loss curves and confusion matrices to compare model performance across 10 classes.

HIGH SCHOOL LEADERSHIP AND ACTIVITIES

FIRST Robotics Competition

2025

High school robotics participant | FIRST Championship, Houston, TX

International Student Association and Ambassadors | Officer

TECHNICAL SKILLS

Design and analysis: Altium Designer, LTspice, MATLAB

Programming: Python, Java

Machine learning and data: PyTorch, NumPy, pandas, Matplotlib, Seaborn