Alina Wang

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EDUCATION

Carnegie Mellon University | Pittsburgh, PA, *Robotics Institute* **Expected May 2027**
Masters of Robotic Systems Development

Cornell University | Ithaca, NY, *College of Engineering* **May. 2025**
Bachelor of Science in Electrical and Computer Engineering, Minor in Robotics, Business | **Magna Cum Laude GPA 3.78**

PROFESSIONAL EXPERIENCE

Tesla Inc. | Sunnyvale, CA, *Hardware Test Engineering Co-op Intern* **Jan. - Aug. 2024**
- Designed and assembled a custom PCBA to test inverter MOSFET power modules, accelerating testing by 30% with automated Python test script communicating with curve tracer
- Developed an automated oscilloscope data capture system for electrically induced bearing damage testing, enabling real-time voltage analysis while spinning drive units under test parameters
- Programmed a data-analysis pipeline for a walk-in chamber test setup, used for evaluating Robotaxi drive unit lubrication performance under pressure-related failure modes
- Expanded and automated off-dyno high-speed test rigs across CA and NV under power constraints, analyzing test performance across 30+ drive units

Harbinger Motors Inc. | Gardena, CA, *Electrical System Team Intern* **May – Aug. 2023**
- Scripted in Python and Javascript for auto-generating XML file used in Capital Wiring Harness Designer
- Assembled and tested 3 revs. of LIN communication PCB between power control unit and battery sensors
- Designed trunk, cabin, and jumper harnesses in device transmittal sheet and routed HV cables in CATIA
- Tested current shunts, battery thermistors, WSS and analyzed test data with Picoscope and vSignalyzer

AWISCO Corp | Queens, NY, *Business Intern* **May – Aug. 2022**
- Renewed product description for 30,000 inventory, increasing Google search exposure rate by 12%
- Designed a tier bonus system for employees and put into use after testing with 2018-2022 financial data
- Presented inclusiveness and diversity solutions to the executive board and managers
- Performed monthly tax audit and customer ticket verification, handling 3000+ transactions

Cornell University | Ithaca, NY, *Teaching Assistant* **Aug. 2022 – May. 2025**
CS 1112 & ECE 5725
- Held weekly office hours to answer projects, homework, and lab related questions in Python & MATLAB
- Organized weekly 2-hour mini lectures in tutoring time, going over difficult concepts and assignments
- Led weekly lab sessions, guiding students in creating games and building robots using Raspberry Pi 4 in Linux

TECHNICAL EXPERIENCE

CMU AirLab | Pittsburgh, PA, *Offroad Autonomy Research Intern* **Jun. 2025 - Present**
- Designed and executed brake integration test, deriving a controller model to integrate braking into autonomy stack
- Diagnosed and repaired steering wheel assembly (encoder, motor, controller) to ensure automatic steering zeroing
- Benchmarked VLM-based long range waypoint generations, evaluating their spatial and temporal reasoning ability

HAPPI Lab | Ithaca, NY, *Student Researcher* **Jan. 2025 – May. 2025**
- Designed and built a wearable device with multi-op-amp/voice coil circuit to mimic social touch with haptics
- Developed MATLAB & Python computer vision pipeline to generate, capture, and analyze voice coil displacement

GHG Flux Chamber | Ithaca, NY, *Student Researcher* **Sept. 2024 – May. 2025**
- Tested external memory mounting via SD card breakout board on Raspberry Pi Pico to store sensor data
- Developed an open-source C library to interface with multiple GHG sensors and SD card for various-speed data logging
- Designed a terminal-based user interface to enable easy control for the environmental science community

Cornell Racing FSAE | Ithaca, NY, *Low Voltage & High Voltage Subteam* **Oct. 2021 – Dec. 2023**
- Designed and assembled a dashboard with drive-critical buttons and 7-segment display (22-23)
- Upgraded control panel to improve serviceability, created harness sheet, and conducted testing (22-23)
- Designed and fabricated control panel's enclosure and front panel using CAD and 3D printing (21-22)
- Researched and helped build the motor dynamometer system consisting of water cooling lines

TECHNICAL SKILLS

Software: ROS2, Python, C++, Java, MATLAB, LaTex, Linux, Docker, Git, Quartus
Hardware: LTSpice, Altium, CAD, FEA, Microcontroller, FPGA, PCB Bringup
Extracurricular: Mandarin (Fluent), Bouldering, Tree Climbing, Surfing, Skiing, Cooking