Cooper Wang
cooperwang0912@gmail.com · 508-416-9025

Education

University of Illinois Urbana-Champaign — Urbana-Champaign, IL
Bachelor of Science in Mechanical Engineering — Aug 2025 - May 2029
Courses: ME270, ME199, MATH241, MATH257

Work Experiences

Illini Electric Motorsports — University of Illinois Urbana-Champaign
Team Member — Aug 2025 - Current

- Calculated vehicle hub fatigue with 6000 data points using S-N Curve through Python
- Tested bonding techniques for aluminum inserts and carbon tubes

Lebai Robotics — Shanghai, China
Intern — June 2025 - July 2025

- Used a cheap 70 dollar camera with TOF functionalities as a depth sensor for 6-axis robot arm grappling without AprilTags that is accurate within a 50 centimeter radius
- Performed Hand-Eye Calibration of the arm that is accurate to within 3 centimeter of actual end effector location
- Coded human-robot interaction scripts using speech recognition API and computer vision

FIRST Robotics Team — St. Mark's School
Co-Leader of Software Team — 2022 - 2025

- Managed a group of 7 coders to work on various autonomous and manual functionalities of the robot
- Coded the hardware calibration program for 2 different subsystems, and configured 2 Limelight cameras
- Wired over 15 motors and motor controllers, network switches and WIFI routers, and control panels within 3 days with another team member

Harvard Weitz Lab — Harvard University
Intern — June 2024 - July 2024

- Worked on creating more stretch resistant metamaterial replacement to concrete
- Designed 2 different parts for conducting bending tests on a rheometer and 3 different molds for the metamaterial
- Coded Python scripts that analyze the new materials' Young's Modulus from the 3 point bending test
- Tested more than 10 compositions for potential metamaterials

Skills and Relevant Courses

Programming Languages:	Python, Java, C++, HTML/CSS, JavaScript, LaTeX
Software:	GitHub, Onshape/Solidworks/Fusion, Matlab, Linux, SQL Database

Projects

Inertial Measurement Based Black Ice Detection System (2024-2025)
Built a scale model for autonomous vehicles using a 500 dollar budget to gather inertial measurement data for black ice, and trained both CNN and RNN neural networks on over 110,000 datapoints, with the detection accuracy being 99.5 and average inference being less than 1 milisecond.

LionLink Computer Science Team Project (2023-2025)
Worked on managing the AWS server and SQL database of a student ran application with information of more than 400 users and more than 10,000 entries across multiple different tables. Maintained the GitHub repository, and coded Javascript programs that populate data, check for data integrity, and identify text in populated images using Google Gemini API.

AI Chatbot Project (2023-2025)
Created locally deployed AI ChatBot on M1 Mac with 15 second inference time using Ollama for LLM models, VOSK for real time speech recognition, GPT-SoVITS for text to speech, and Live2D for animation.

Awards and Honors

Massachusetts Science Fair Second Place Award — Massachusetts Science and Engineering Fair
Awarded to high scoring projects in the Massachusetts Science and Engineering Fair — 2025

AMD Engineering Excellence Award — Worcester Science and Engineering Fair
Awarded to the highest scoring engineering project in the Worcester Science and Engineering Fair — 2025

USACO Gold Division Qualifier — USA Computing Olympiad
Qualified for the USACO Gold Division Competition — 2022