

CHARMAINE GUO

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EDUCATION

Northwestern University B.S. in Materials Science & Engineering	June 2028 Overall GPA: 3.38/4.00
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SKILLS

Computer Languages	Python, Java, MATLAB, HTML, CSS
Soft Skills	Project Management, Teamwork, Time-Management, Adaptability
Hard Skills	Research Methods, Data Collection, 3D Printing, SolidWorks
Organizational Tools	Microsoft Excel, Google Drive

EXPERIENCE

Quality Intern <i>Littelfuse</i>	June 2025 - August 2025 Beverly, MA
<ul style="list-style-type: none">Developed an automated Excel database for 300+ reports using Power Query, enabling instant retrieval by part number, package, or leadframe.Overhauled the legacy filing system, reducing report search times from hours to minutes for the Beverly team.Gained hands-on experience in semiconductor packaging, test calibration, and failure analysis (FA), including chemical/laser decap.	

Undergraduate Researcher <i>Northwestern University</i>	October 2024 - June 2025 Evanston, IL
<ul style="list-style-type: none">Fabricated ethyl cellulose–acrylic acid films to investigate color formation without dyes.Examined the UV-curing process that solidifies cellulose crystals and generates structural color.Analyzed using MATLAB how varying cellulose concentrations affect crystal arrangements and resulting colors.	

Engineer Intern <i>Weston Department of Public Works</i>	June 2024 - August 2024 Weston, MA
<ul style="list-style-type: none">Transferred water pipe data from hand-drawn maps into a GIS-based system, improving online organization.Identified five roads with lead pipes, leading to successful excavation and replacement.Assisted with water treatment operations, gaining hands-on infrastructure experience	

PROJECTS

Purrfect Care <i>Python, PyQt5, Gemini API</i>	Desktop (WildHacks) March 2025
<ul style="list-style-type: none">Built a PyQt5 desktop app with wellness reminders, to-do list, and animated notifications.Integrated Gemini API for contextual chat with a virtual assistant cat.	

Skynet System <i>Onshape, Arduino IDE, ESP32</i>	Team Project (Design Thinking & Communication) January - March 2025
<ul style="list-style-type: none">Designed solutions for remote zoo access, with 3d printed prototypes including an interactive online tour prototype built with web technologies and a Hexbug like design.Final deliverable: a zipline-mounted camera system enabling live video feed controlled remotely by users.	

EXTRACURRICULAR ACTIVITIES

Finance Lead <i>Society of Asian Scientists and Engineers (SASE)</i>	January 2025 – Present
<ul style="list-style-type: none">Organizing fundraisers and managing financial operations, budgeting, and expense tracking.Writing grants and collaborating with the club to ensure efficient financial planning and resource allocation.	

Power Distribution Management <i>Northwestern Formula SAE (NUFSAE)</i>	October 2024 – Present
<ul style="list-style-type: none">Utilizing Altium Designer to create and refine the power distribution PCB for the vehicle's electrical system.Teaching team members harness design workflows in RapidHarness, improving documentation consistency and design efficiency.Applying SolidWorks to analyze and support mechanical–electrical integration of wiring and components.	