

CHARMAINE GUO

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EDUCATION

Northwestern University B.S. in Materials Science & Engineering Overall GPA: 3.25/4.000	<i>June 2028</i>
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SKILLS

Computer Languages	Python, Java, MATLAB, HTML, CSS
Soft Skills	Project Management, Teamwork, Customer-oriented, Adaptable
Hard Skills	Laboratory work, Research Design, Lab Safety, Capillary Rheometer, Osmium Coater, Spectrometer, ICP
Organizational Tools	Microsoft Excel, Google Drive

EXPERIENCE

Research Aide <i>Northwestern University</i>	October 2024 - Present <i>Evanston, IL</i>
<ul style="list-style-type: none">· Collaborating with a graduate student on cellulose crystallization research, focusing on color formation without dyes.· Studying how UV light cures acrylic acid, solidifying cellulose crystals and creating structural colors· Analyzing 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 <i>Weston, MA</i>
<ul style="list-style-type: none">· Analyzed and documented water pipe materials and diameters from hand-drawn maps· Meticulously entered data into a new management system with a focus on GIS application.· Studied and maintained the town's water distribution system, including public and private water lines and meters.· Supported water treatment plant analysis and operations, gaining practical knowledge of water infrastructure.	
Maple Hill Architects <i>Architectural Intern</i>	June 2022 - Feb 2023 <i>Wayland, MA</i>
<ul style="list-style-type: none">· Studied real-life applications of a home design process· Completed models of current and future houses for clients using Sketchup.	

EXTRACURRICULAR ACTIVITIES

Northwestern Formula SAE (NUFSAE) <i>Power Distribution Management</i>	October 2024 – Present
<ul style="list-style-type: none">· Working on the electrical systems team to design the back box harness and build the top hoop harness.· Collaborating with the accumulator team to design the low voltage battery box.· Learning and applying software like Altium, SolidWorks, and RapidHarness.· Contributing to team milestones and ensuring technical goals align with deadlines.	
McCormick Student Advisory Board (MSAB) <i>Project Development Team</i>	January 2025 – Present
<ul style="list-style-type: none">· Assisting in organizing departmental events to connect students with faculty and industry professionals.· Providing input on academic initiatives and fostering a collaborative environment for Northwestern McCormick School of Engineering students.	
Tikkun Olam Makers (TOM)	January 2025 – Present
<ul style="list-style-type: none">· Collaborating with a team to design and prototype affordable, durable switch-adapted toys for children with disabilities.· Partnering with the Park School to develop accessibility solutions for students aged 5-21 with cognitive and motor impairments.· Utilizing engineering, design, and rapid prototyping skills to create user-friendly assistive devices.	
Society of Asian Scientists and Engineers (SASE) <i>Finance Lead</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.	