

# CHARMAINE GUO

118 Concord Road ◊ Wayland, MA 01778  
(407) · 820 · 7755 ◊ charmaineguoo6@gmail.com  
Website: charmaineguoo.com

## EDUCATION

**Northwestern University**  
B.S. in Materials Science & Engineering  
Overall GPA: 3.031/4.000

June 2028

## SKILLS

<b>Computer Languages</b>	Python, Java, MATLAB, HTML, CSS
<b>Soft Skills</b>	Project Management, Teamwork
<b>Laboratory work</b>	Research Design, Lab Safety, Capillary Rheometer, Centrifuge, Speedmixer, ICP
<b>Organizational Tools</b>	Microsoft Excel, Google Drive

## EXPERIENCE

<b>Northwestern University</b> <i>Research Aide</i>	October 2024 - Present Evanston, IL
--	--

- 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.

<b>Northwestern University</b> <i>Swim Instructor</i>	October 2024 - Present Evanston, IL
--	--

- Energetically customizing instruction strategies based on knowledgeable evaluations of students' abilities.
- Maintaining participant progress by offering regular feedback and technique suggestions.
- Leading 5 swim classes per week for over 25 total participants.

<b>Weston Department of Public Works</b> <i>Engineer Intern</i>	June 2024 - August 2024 Weston, MA
--	---------------------------------------

- 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.

## EXTRACURRICULAR ACTIVITIES

<b>Northwestern Formula SAE (NUFSAE)</b> <i>Power Distribution Management</i>	October 2024 – Present
--	------------------------

- 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.

<b>McCormick Student Advisory Board (MSAB)</b> <i>Project Development Team</i>	October 2024 – Present
---	------------------------

- 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.

<b>Tikkun Olam Makers (TOM)</b>	October 2024 – Present
---------------------------------	------------------------

- Using engineering, design, and rapid prototyping skills to develop low-cost solutions to real-world challenges.
- Participate in hackathon-style events to build functional prototypes and present outcomes to stakeholders.

<b>Northwestern Water Polo Club</b>	October 2024 – Present
-------------------------------------	------------------------

- Participating in weekly practices and team tournaments to develop teamwork and athletic skills.
- Supporting recruitment efforts and organizing club activities to enhance team dynamics.