

CHARMAINE GUO

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EDUCATION

Northwestern University

June 2028

B.S. in Materials Science & Engineering
Member of NUFSAE
Member of TOM
Member of MSAB
Member of NU Water Polo Club
Overall GPA: 3.031

EXPERIENCE

Northwestern University

October 2024 - Present

Research Aide

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.

Northwestern University

Octor 2024 - Present

Swim Instructor

Evanston, IL

- 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.

Weston Department of Public Works

June 2024 - August 2024

Engineer Intern

Weston, MA

- Analyzed and documented water pipe materials and diameters from hand-drawn maps; entering 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.

SKILLS

Computer Languages

Python, Java, MATLAB, HTML, CSS

Soft Skills

Project Management, Teamwork

Labratory work

Research Design, Lab Safety, Capillary Rheometer, Centrifuge, Speedmixer, ICP

Organizational Tools

Microsoft Excel, Google Drive