

# CHARMAINE GUO

Wayland, MA 01778 & Evanston, IL 60201  
(407) · 820 · 7755 ◊ guo.charmaine.cg@gmail.com  
Website: [charmaineguo.com](http://charmaineguo.com)

## EDUCATION

**Northwestern University**  
B.S. in Materials Science & Engineering

June 2028  
Overall GPA: 3.47/4.00

## SKILLS

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

## EXPERIENCE

**Quality Intern** June 2025 - August 2025  
*Littelfuse* *Beverly, MA*

- 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** October 2024 - June 2025  
*Northwestern University* *Evanston, IL*

- 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** June 2024 - August 2024  
*Weston Department of Public Works* *Weston, MA*

- 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** Desktop (WildHacks) March 2025  
*Python, PyQt5, Gemini API*

- 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** Team Project (Design Thinking & Communication) January - March 2025  
*Onshape, Arduino IDE, ESP32*

- 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** January 2025 – Present  
*Society of Asian Scientists and Engineers (SASE)*

- 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** October 2024 – Present  
*Northwestern Formula SAE (NUFSAE)*

- 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.