

Yu Ling (Nicole) Lu

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EDUCATION

Northwestern University | Evanston, IL

B.S in Computer Science; Concentration: Systems

September 2023 – September 2026

- Dean's List: Fall 2023, Spring 2024, Fall 2024, Spring 2025; GPA: 3.80
- Relevant courses: Data Structures & Algorithms, Computer Systems, Computer Networking, Operating Systems, HCI studio

PROFESSIONAL EXPERIENCES

Design, Technology and Research (DTR) Lab | Evanston, IL

Undergraduate Project Lead

April 2025 – Present

- Designed and evaluated interactive systems using HCI research methods, applying AI-assisted prototyping and user-centered design.
- Operated in rapid iteration cycles using agile practices to run usability studies, analyze qualitative feedback, and improve UX reliability, robustness, and maintainability over time.

ICE power | Søborg, Denmark

June 2025 – August 2025

Software Developer Intern

- Built a scalable Vue.js and TypeScript UI for real-time streaming data visualization, replacing outdated, static tools and improving engineering debugging efficiency across three departments.
- Integrated C++ amplifier telemetry with Git and Jira version control via WebSockets, shared memory, and CAN bus, reducing system testing workload by 60% and improving pipeline stability in production workflows.

Advanced Materials Industry Consortium (AMIC) | Madison, WI

June 2024 – August 2025

Project Assistant

- Conducted competitive-intelligence research for national semiconductor conferences (SemiCon West, M-WERC), delivering analysis that reduced partner technology-evaluation time by 25%.
- Authored client-facing technical reports for Daylight Solutions and PowerAmerica, securing both companies as new AMIC sponsors.

SOFTWARE & DESIGN PROJECTS

AI Powered Platform for Personalized Academic Planning | *Go, PostgreSQL, Docker, GPT-4, Next.js, ShadCN, TailwindCSS*

- Implemented RESTful APIs and data pipelines using Dockerized PostgreSQL caching, improving backend throughput and response latency by over 30% during peak traffic.
- Developed interactive dashboards with Next.js and ShadCN UI, delivering personalized course sequencing and GPT-powered recommendations for more informed academic planning.

Women in Computing website | *React.js, Flask, Notion API, Google Forms API, Vercel*

- Engineered a real-time leaderboard integrating Google Forms and Notion APIs, increasing event engagement campus-wide by ~25%.
- Deployed CI/CD workflows with Vercel for rapid feature releases, scaling reliably to 100+ concurrent users during peak recruitment.

AgileX Ranger Computer Vision | *C, C++, OpenCV, ROS 2, Robot SDK*

- Programmed real-time color-based path following using OpenCV and ROS2 messaging on the AgileX Ranger robotics platform.
- Executed obstacle-recognition tests achieving ~88% detection accuracy across diverse lighting conditions and environments.

Assistive Devices for Occupational and Pediatric Therapy in Healthcare

- Co-designed switch-adapted assistive devices adopted by 40% of therapists, while iterating with clinician and user testing feedback.
- Collaborated in a multidisciplinary team, managing prototyping, documentation, design requirements and safety considerations.

LEADERSHIP POSITIONS

Northwestern University | *Teaching Assistant*

September 2025 – Present

- Delivered weekly instruction to 20+ students, conducting hands-on lab support to improve code quality, documentation, and testing.

Women in Computing | *Programming Co-Chair, Evanston, IL*

January 2024 – Present

- Hosted networking and social opportunities for 900+ members, developing time-management and organizational skills while connecting faculty, students, recruiters and alumni, to empower women in the tech community

Rock Climbing Club | *Event Coordinator & Outreach Lead, Evanston, IL*

September 2023 – Present

- Recruited 468 new members in Fall 2024, strengthened community by leading club climbs, acquiring partners including Arc'teryx, Red Bull, Liberty Mountain, MadRock, Trango, BeReal while spearheading efforts for first Northwestern climbing wall

SKILLS

Languages: Python, C++, Javascript, Typescript, C, Racket, Go, MATLAB

Frameworks/Libraries: Vue.js, Node.js, Next.js, Flask, React, WebSockets, OpenCV, ROS 2, Robot SDK, SDKs

Eligibility: I am authorized to work in the US under F-1 visa OPT and CPT without sponsorship.