

Elaine Cui

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Education

Northwestern University

B.S. in Computer Science, Minor in Mathematics

• **GPA: 3.95/4.00** | ACT: 35 | Dean's List

• **Relevant Coursework:** Data Structures, Algorithms, Systems, Machine Learning, Discrete Math, Multivariable, Linear Algebra

June 2026

Evanston, IL

Professional Experiences

Minnesota Government IT Services | Health Department

Software Engineer Intern

June 2024 – Present

Minneapolis, MN

- Redesigned immunization SMS system with **AWS Pinpoint**, **Python**, and **JSON** for 1,000+ campaigns and 500,000+ Minnesotans to keep citizens up to date with reoccurring health care information and updates, migrating from manual system.
- Proxied job board using **Vue.js** by converting **XML** to **JSON** to generate filtering queries and pages on **Drupal**.

The Garage Northwestern

Full Stack Software Engineer

September 2023 – Present

Evanston, IL

- Structured dynamic hub/website leveraging **React**, **Typescript**, and **AWS** for centralizing entrepreneurship workshops, alumni databases, and idea creation for **1,500+** startups, **1,000+** students, and alumni at Northwestern and San Francisco.
- Conducted field study research on needs of participants through **30+** hours of surveys and primary research, consolidating into initial minimum viable product with focus on simplifying and engaging students with the startup program.

Caraburo IT Consulting

Software Engineer Intern

May 2023 - September 2023

Minneapolis, MN

- Facilitated creation of a full stack web application using **React** and **Python** to search for affordable daycare centers in **20+** states by developing **API** requests to retrieve data from backend **mysql** databases, utilizing **Google Maps** and **Places API**.
- Advocated and collaborated with client for **100+** parents to allow communication between parents and daycare centers.

Project Experiences

Scholarly | Northwestern WildHacks Winner - Best Use of AI in Education

Python, MongoDB, FastAPI, Claude-3, React, TypeScript, Tailwind

April 2024 - May 2024

Evanston, IL

- Founded **AI** educational platform with team to promote accessibility, simplifying **10,000,000+** research and academic materials into **6** literacy levels and formats to then be saved and shared digitally in platform classrooms for educators or students.

OurConnection Prototype — DSGN 208 Design, Thinking, and Doing

Python, React, MongoDB, TypeScript, Tailwind

April 2024 – May 2024

Evanston, IL

- Spearheaded platform for incarcerated women to post their stories and increase awareness through a pen pal program, interviewing **5+** current and past incarcerated women and prototyping with Women Initiating New Directions through the design process.

The Garage Launchpad

Python, React, TypeScript, Tailwind, AWS, Next.js

September 2023 – Present

Evanston, IL

- Developed full stack web application using **React**, **Python**, and **AWS Lambda**, API Gateway, and RDS to create a dynamic directory of **1,500+** alumni and current startup students, allowing keyword filtering through **SQL** queries.

Evanston Bus Tracker

C, C++

February 2024 – March 2024

Evanston, IL

- Retrieved bus information to perform navigation of Open Street Map through **API** implementation and graphical displays; Provided **200+** buildings and bus times for **20+** stops on campus to increase ease of navigation for students.

Python Subset Execution Environment

C

January 2024 – February 2024

Evanston, IL

- Implemented **scanner**, **execute**, and **memory** components of Python using C by identifying tokens, traversing through operational graph structures, and directing memory allocation, decreasing initial complexity by 25%.

YouTube to MP3 Converter

Python, JavaScript, CSS, HTML

July 2023 – August 2023

Minneapolis, MN

- Designed website utilizing **Python**, **HTML** and **CSS** that converts YouTube videos into **MP3** files, providing downloaded MP3 files with error handling and using **YouTube Data API**; Adopted by school media club for video editing by **50+** students.

Skills & Interests

Programming Languages: Python, Java, C++, C, TypeScript/JavaScript, HTML/CSS, x86-64 Assembly

Technologies: React, Next.js, AWS, MongoDB, SQL/NoSQL Databases, Vue.js, FastAPI, Tailwind, NumPy, Linux

Interests: Graphics, Machine Learning, Marvel, Kimchi Ramen, Taylor Swift, Realism Drawing, Marques Brownlee, Video-Creation