

Natalie Rie Cheng

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EDUCATION

Northwestern University

Evanston, IL

Bachelor of Science in Computer Science

Expected Graduation: June 2026

Minor in Classics, Certificate in Human-Computer Interaction

GPA: 3.8/4.0

Relevant Coursework: Data Structures & Algorithms | Game Design | Operating Systems | Discrete Math

Organizations: Women in Computing | Pioneers of Interactive Entertainment | Society of Women Engineers

SKILLS & AWARDS

Programming: Java | Python | C/C++ | HTML | Javascript | CSS | C# | MatLab | Racket | DSSL2

Software: React.js | Node.js | Git | scikit-learn | NumPy | Matplotlib | Figma | Lucidchart | Unity

Awards: Northwestern Dean's List High Honors ('23) | The Thacher School Cum Laude Society ('21) | 1st place Collins Aerospace Innovate Award (FTC Robotics '21) | 3rd place Judges' Award (FTC Robotics '21)

Interests: Aerial Silks | Tennis | Guitar/Songwriting | Gaming | Rock Climbing (ask about outdoor climbing!)

PROFESSIONAL EXPERIENCE

Northwestern Technological Innovations for Inclusive Learning & Teaching Lab

Evanston, IL

Multicraft & Gesturecraft Project Software Developer

Sept. 2023 – Present

- Created a controller system of customizable hand gestures to adaptively play Minecraft
- Trained an ML system with Google MediaPipe to identify and classify different hand gestures
- Spearheaded the transfer from a local-based Python script to a browser-based Javascript application

MusicNU Project Front-End Developer and Researcher

April 2023 – Present

- Utilized React.js and Node.js to develop a website to teach music theory in Chicago high schools
- Constructed software capable of independently extracting rhythmic and melodic song patterns
- Employed self-taught frontend skills to build multi-page music visualizations

Fulcrum Global Technologies

Chicago, IL

Software Development Intern

June 2023 – Aug. 2023

- Led the development of a proprietary AI-based data extraction tool for workflow automation in the legal industry by designing and creating 100+ web and application page wireframes
- Built 20+ functional webpage prototypes to demonstrate product potential for work optimization
- Facilitated the integration of a data extraction product to construct a B2C marketplace while working in an Agile environment as the primary liaison between two project leads

JYC Girls Impact Foundation Girls4Girls Coding Initiative

Hong Kong SAR

Coding Counselor

Aug. 2021

- Mentored middle school girls in the Intro to Coding program
- Conducted coding exercises for program participants in groups of 10-20 as a teaching assistant

TECHNICAL PROJECTS

Adaptive Xbox Controller Joystick

March – June 2023

- Designed a controller system to interface with the Xbox Adaptive Controller for an upper-arm amputee
- Constructed a functional residual limb joystick that enables playing of first-person combat games
- Worked in a team of 4 to produce a 58-page report documenting the design and fabrication process

Spotify Random Recommendations Generator

April 2023

- Designed and built a web app using Node.js, EJS, and Spotify Web API
- Generates song recommendations and produces a playlist based on a user-given genre

Analysis and Prediction of US Pollution Trends (github.com/natalie-cheng/pollution-project)

Jan. – July 2021

- Learned data cleaning and analysis and machine learning model creation
- Analyzed and graphed the effects of 4 air pollutants in the US
- Created a machine learning model using scikit-learn to predict and plot pollution trends until 2026