

Crystal Chen

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EDUCATION

Northwestern University – Evanston, IL

Expected Graduation June 2027

- Bachelor of Science in Computer Science & Business Institutions Minor | GPA: 3.8
- **Relevant coursework:** Data Structures and Algorithms, Computer Programming with Python, Computer Programming with C/C++, Human Computer Interaction, Discrete Math

EXPERIENCE

United Airlines – Chicago, IL

Incoming Summer 2025

Digital Technology Intern

Crawford, Murphy & Tilly - Springfield, IL

Information Technology Intern

Jun – Sep 2024

- Enhanced Sentinel KQL query efficiency and improved security event monitoring by 20% through targeted query editing.
- Designed and formatted a Helpdesk request form for the marketing team, ensuring alignment with their needs and proper ticket routing.
- Developed a web application for floor plans, integrating it into Microsoft Teams. This application digitizes 15 floor plans across various company locations and includes an employee seating chart to boost connectivity and efficiency. Built backend databases using SQL Server for employee information and utilized Esri ArcGIS mapping services for geometric data. Created the UI/UX in Figma and developed the frontend using the Esri API.

Information Technology Intern

Jun – Sep 2023

- Conducted Power BI projects analyzing data on software renewal and spending forecasts, cyber security risks, and computer refresh forecast schedules with utilization of SQL and query editing to create automated presentations.
- Digitized company archives, transitioning from DVD files to cloud-based storage.
- Contribution to AI incorporation discussion and ethical use.
- Edited Sentinel queries to improve security alerts and redundancy by 10%.

Airbnb Homes - Springfield, IL

2016 - Present

Account Manager of 9 listings

- Facilitated smooth guest check-ins and addressed concerns for a comfortable stay.
- Coordinated with the team to ensure timely cleaning between reservations.

PROJECTS

CrowdScope | React

Feb – May 2024

- Developed a crowdsourcing app to help estimate real-time crowdedness around campus.
- Collaborated on UI/UX design to ensure an intuitive and user-friendly app experience.
- Developed a location-triggered update feature for timely crowd status reports.
- Enabled functionality to update the user's live location every few seconds and transmit data to backend for analysis.

Open Street Map Navigator | C++, TinyXML, Google Test

Apr – May 2024

- Developed an Evanston map navigator, utilizing TinyXML for node data extraction.
- Defined buildings and footways based on nodes, enabling map searching functionality with C++.
- Integrated Chicago Transit Authority's bus API to provide real-time proximity-based stop information.

Python Execution Environment | C, Google Test

Mar – Apr 2024

- Developed a C-based execution environment for a Python language subset defined by BNF.
- Constructed a recursive-descent parser for Python code interpretation and syntax error identification.
- Executed support for function calls, binary expressions, assignments, and while loops.
- Devised a memory management module for object handling and leak prevention.

Magnetic Adaptable Sandwich Board (MASB)

Sep – Dec 2023

- Engineered an adjustable board for a client with limited left arm mobility, enhancing their daily independent functionality.
- Conducted client interviews and led a team in stroke-related research to tailor to a custom design solution.
- Handcrafted the final product, achieving high precision and quality; recognized for exceptional design and potential.

ShowerSweep

Mar – Jun 2024

- Initiated and managed a project to improve communal showers by addressing hair accumulation.
- Analyzed over 2,000 user surveys to refine product design focused on user needs and interaction.
- Crafted a high-quality, safe, sustainable product, ensuring a positive user experience.
- Sharpened leadership and team-building skills from project inception to final reporting and delivery.

SKILLS & INTERESTS

Programming Languages: Python, C, C++, SQL, MATLAB, Racket, DSSL2, KQL, Java, React

Technologies: Microsoft SQL Server, Microsoft 365, Power BI, Microsoft Sentinel, Esri ArcGIS, Figma, VS Code

Interests: Scrapbooking, Tennis, Mandarin (Fluent), Cooking, Skincare, Photography, Video Editing, Sketching