Erika Sy

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EDUCATION

University of Wisconsin, Madison – ***Bachelor of Science, Computer Science*** Sep. 2024 - May 2026
Coursework - Introduction to Artificial Intelligence, Introduction to Computer Engineering

University of Illinois, Chicago – ***Bachelor of Science, Computer Science*** Aug. 2022 - May 2024
Coursework - Software Design, Machine Organization, Data Structures, Programming Practicum, Discrete Math, Calc 3, Stats 1, Physics 1

SKILLS

Languages: C++, C, Python, Java, JavaScript, HTML, CSS, R
Frameworks & Libraries: MediaPipe, Unreal Engine, Pandas, React
Tools: Codesys, Miniconda, Pycharm, SolidWorks, Postman, PowerBi, Figma

EXPERIENCE

Software Engineering Fellow – ***Headstarter*** May. 2024 - Aug. 2024
- Engineered **5+** AI applications and APIs using **Next.js**, **OpenAI**, **Pinecone**, and **Stripe API**, achieving **98%** accuracy. Managed the project lifecycle from design to development, implementing MVC design patterns to ensure robust and scalable solutions.
- Secured a position among **15,818** selected candidates from **41,803** applicants. Enhanced skills through coaching from Amazon, Bloomberg, and Capital One, focusing on Agile methodologies, CI/CD processes, Git version control, and microservice architecture.

Business Technology Solutions Intern – ***AbbVie*** May. 2024 - Aug. 2024
- Identify and implement automation opportunities within the ServiceNow platform to enhance efficiency and reduce operational costs.
- Led **8** employee workshops, utilized Spreadsheets to document **12** processes, and used Visio to map out **5** of those processes.
- Assisted in rebranding the AI landing page, contributing to a more user-friendly interface that improves the customer experience.
- Conducted **3** batches of smoke testing using **Postman** and contributed to the prompt engineering library.

Research Assistant – ***University of Illinois, Chicago*** Feb. 2024 - May 2024
- Contributed to a project to develop a digital twin for managing nuclear waste, utilizing technologies such as **Codesys** and **Unreal Engine**.
- Enhanced the project's efficiency by optimizing the existing simulation code and improving the real-time TCP/IP communication between the physical crane operations and their digital twin representation.
- Examined performance bottlenecks and executes strategic code optimizations to improve the system's efficiency and safety protocol.

Early Research Scholar – ***University of Illinois, Chicago*** Aug. 2023 - May 2024
- Engaged in a forward-looking project to design a whiteboard application using **MediaPipe**, **OpenCV**, **MiniConda**, and **Pycharm**. The application uses hand gesture recognition via camera, allowing users to control and interact with a digital whiteboard intuitively.
- Participated in solution-oriented team discussions and mentor-led reviews to enhance the application's functionality and user experience.
- Presented research findings and demonstrated the application's capabilities in a comprehensive poster session.

Seasonal Advisory Intern – ***KPMG*** May 2023 - May 2023
- Investigated innovative technological solutions to help the firm achieve a **net-zero** carbon footprint by 2030.
- Leveraged **PowerBi**, **PowerPoint**, and **Excel** to create visually compelling presentations and reports, enhancing stakeholder engagement.
- Wireframe an app using **Figma** that incentivizes sustainable travel choices by rewarding employees with redeemable points for prizes.

PERSONAL PROJECTS

AI Powered Support Assistant | *Next.JS* Aug. 2024 - Aug. 2024
- Developed an AI Support Assistant using **Next.js**, **Material-UI**, and **OpenAI API** to enhance user interaction with real-time support.
- Integrated Error Handling, loading states, real-time messaging, auto-scrolling, and multi-language support for improved usability.
- Set Up Development Environment and Deployment Pipeline with **Node.js**, **Vercel**, and testing to ensure robust and scalable application performance.

Space Invaders | *Python* Aug. 2024 - Aug. 2024
- Developed a Space Invaders clone that utilizes **Python** and **Turtle graphics** to recreate the game with progressive difficulty levels.
- Incorporated a high scoreboard feature to track player achievements, encouraging competition and motivating continuous playability.
- Designed user interface with introductory and "you lose" screens to enhance the gaming experience.

Harry Potter Sorting Hat | *Python* Jul. 2022 - Aug. 2022
- Built an interactive **game** using Python Turtle Graphics to simulate the Sorting Hat's house selection process based on their responses to questions.
- Developed and implemented an algorithm that analyzes and weighs user responses to determine the most suitable house placement.

EXTRACURRICULAR

Newsletter Chair – ***Women in Computer Science*** *May 2023* - May 2024
- Crafted **10** bi-weekly newsletters to inform WiCS Members about upcoming programs, workshops, and initiatives to increase engagement.
- Collaborated in bi-weekly meetings, bringing innovative event ideas to cultivate a sense of community.
- Provided support in orchestrating **13** WiCS events, **3** fundraisers, and **1** woman in tech week, assisting with setup and cleanup.

Organizer – ***SparkHacks*** Sep. 2023 - Feb. 2024
- Orchestrated a student-run **hackathon** that had **300** participants collaborate, innovate, and compete over **24** hours and a series of **4** prompts.
- Coordinated with judges on the hackathon's objectives, criteria for evaluation, and the support needed to carry out their roles effectively.
- **Co-led** a Mario Kart tournament with **25** participants to foster community engagement and provide a fun break.
- Analyzed feedback, identified areas of improvement, and implemented strategies to strengthen future events.

AWARDS

Ideathon Participant – ***Code Your Dreams*** Apr. 2023
- A Hack for Accessibility event with Google Chicago and Deaf Kids Code aimed at making technology more accessible and inclusive.
- Developed a **wireframe** for a website that features a dynamic calendar that employs web-based search functionality to automatically curate and display relevant STEM events, fostering greater engagement and opportunities for underrepresented groups.
- Awarded the **Best Community Outreach Award** for the application.