Erika Sy

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EDUCATION

University of Wisconsin, Madison – *Bachelor of Science, Computer Science* — Sep. 2024 - Expected 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: Git, Codesys, Miniconda, Pycharm, SolidWorks, Postman, PowerBi, Figma

EXPERIENCE

Undergraduate Research Assistant – *University of Wisconsin, Madison* — Sep. 2024 - Present
- Engaged in a RoboCup project focusing on advancing autonomous humanoid robots through cutting-edge motion and decision-making technologies.
- Contributing to robotic motion analysis using **SimRobot** to significantly enhance robot walking speed and agility in competitive scenarios.

Augmented Reality Development Extern – *Snap Inc.* — Sep. 2024 - Present
- Set to develop and test **4** AR projects in **Snap's Lens Studio**, utilizing 2D/3D assets and design principles to create immersive digital stories.
- Collaborate with industry experts to explore **AR** technology storytelling techniques and present interactive brand stores to diverse audiences.

Software Engineering Fellow – *Headstarter* — Aug. 2024 - Sep. 2024
- Engineered **5+** AI applications and APIs using **Next.js**, **OpenAI**, **Pinecone**, and **Stripe API**.
- Managed the project lifecycle from design to development, implementing MVC design patterns to ensure robust and scalable solutions.
- Received coaching from Amazon, Bloomberg, and Capital One on **Agile**, CI/CD processes, **Git** version control, and microservice architecture.

Business Technology Solutions Intern – *AbbVie* — May 2024 - Aug. 2024
- Identified and implemented automation opportunities within the ServiceNow platform to enhance efficiency and reduce operational costs.
- Led **8** employee workshops, used **Spreadsheets** to document **12** processes, and utilized **Visio** to map out **5**.
- 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**.
- Discussed performance bottlenecks and optimizing simulation code to enhance TCP/IP communication for the physical crane and its digital twin,

Early Research Scholar – *University of Illinois, Chicago* — Aug. 2023 - May 2024
- Created a hand gesture recognition whiteboard using **MediaPipe**, **OpenCV**, and **Pycharm**, enabling intuitive interactions through gesture tracking.
- Participated in solution-oriented team discussions and mentor-led reviews to refine the application's functionality and user experience.
- Showcased the project's innovation and practical applications capabilities at a comprehensive poster session and the ERSP **national conference**.

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, JavaScript, CSS* — 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 the Development Environment and Deployment Pipeline with **Node.js** and **Vercel** to ensure robust and scalable application performance.

Space Invaders | *Python* — Aug. 2024 - Aug. 2024
- Produced 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 Graphic**s 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
- Published **10** newsletters bi-weekly 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** and managed logistics for a Mario Kart tournament with **25** participants to foster community engagement and provide a fun break.

AWARDS

Ideathon Participant – *Code Your Dreams* — Apr. 2023
- 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.