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Top Skills

Team Management

University Teaching

Semantic Kernel

Honors-Awards

AdaHacks III - First Place in Social
Justice Division

Flex Factor Finalist

Liza George

UIUC BS+MCS in CS '25 | Microsoft SWE Intern

Urbana, Illinois, United States

Summary

I'm a graduate student pursuing a BS+MCS joint degree in Computer
Science in the University of Illinois Urbana Champaign. Through
university courses and projects, I have worked with Python, C, C
++, Java, and Rust, and studied the fundamentals of CS through
fourth-year level courses. I have also gained leadership roles in the
Society of Women Engineers and the Outdoor Adventure Club, and
contributed to volunteer software services through Hack4Impact.

These past two summers, I was a software engineering intern at
Microsoft, where I worked on the Advanced Autonomy and Applied
Robotics team to build a robot teleoperation application on the
Microsoft Teams platform. While on the job I learned C#/.NET, how
to use WebRTC and Azure Communication Services, and ROS2.
Specifically this past summer, I added LLM-based AI agents to
autonomously control robots based on human readable commands.

Two summers ago, I was a full-stack software engineering intern
at Uber, where I was worked on the Uber For Business product.
During this internship, I learned much about industry-scale software
development, as well as how to work with Go, Bazel, and Cadence.

I hope to deepen my computer science knowledge from experienced
mentors, passionate teammates, and valuable work experiences
over the next few years.

Experience

University of Illinois Urbana-Champaign

3 years 1 month

Teaching Assistant

August 2024 - Present (6 months)

Urbana-Champaign Area

As a TA for CS222 (Software Development Fundamentals), I help plan and administer the course, provide technical support, and present lectures. I also aid in managing the CA team, which includes facilitating all-staff meetings and making hiring decisions. I gather feedback regularly from students and other course staff to improve the course every semester.

Research Intern
January 2023 - Present (2 years 1 month)

I am a part of the lab of Professor Kaiyu Guan, who is the Director of the Agroecosystem Sustainability Center and is affiliated with the National Center for Supercomputing Applications. In our research, we utilize satellite data, computational models, and machine learning techniques to develop more productive and sustainable crop practices.
Last spring, I developed an online portal for local farmers, enabling them to access their own crop data and analyze soil moisture data over time. To create this portal, I used Next.JS, Google APIs for integrated maps and plots, and hosted the data on MongoDB.
This semester, I am collaborating with Assistant Professor Bin Peng, two Colombian social scientists, and the NASA LCLUC project to map rural croplands in Colombia."

Course Assistant
January 2022 - May 2024 (2 years 5 months)
Urbana-Champaign Area

As a lead course assistant, I help plan and administer the course, provide technical support, present lectures, and teach during office hours. I also lead the rest of the CA team, which includes facilitating all-staff meetings and making hiring decisions.
Spring '23, Fall '23 - CS222 (Software Development Fundamentals) Head CA; I help plan lectures and improve the resources available to students. I am also responsible for coordinating meetings with and aid in hiring the rest of the course staff. I also gather feedback regularly from students and other course staff to improve the course structure.

Fall '22 - CS222 (Software Development Fundamentals) Project Mentor; managed two student teams as they work on semester-long projects. My responsibilities included teaching them project planning, best practices in software development, and helping them through technical challenges.

Spring '22 semester- CS128H (Introduction to Computer Science II Honors) CA; used the Angular framework to maintain and add features to the course

website. Additionally, mentored two student teams working on their final projects in Rust.

Microsoft
Software Engineer Intern
May 2024 - August 2024 (4 months)
Redmond, Washington, United States

I returned to working with the Advanced Autonomy and Applied Robotics team, part of the Strategic Missions and Technology (SMT) OCTO group, which focuses on human-machine-AI teaming.

During my internship, I developed Agents4Robots, a framework to build AI agents that control specific robot's movements using advanced LLMs and developer-provided tools. I implemented the framework for the Boston Dynamics SPOT and turtlesim. Finally, I integrated it into SMT OCTO's Mission Robotics Platform, allowing users to issue high-level, natural language commands to robot agents via a chatbot interface. Commands are transmitted over the Azure Communication Services network.

This experience expanded my software development skills significantly. I was given autonomy to independently plan, design, and execute the project to achieve an exploratory goal. When integrating with MRP, I collaborated with a larger software development team, learning about the architecture and design necessary to turn proof of concepts into scalable products.

Key Technologies & Tools:

- AI Framework: Semantic Kernel
- Languages: Python (99% test coverage), JS
- Robot Control: ROS2 (through Python and Node.js libraries)
- Networking: Azure Communication Services SDK

I continuously sought feedback on my code quality and worked with software development best practices. During my final presentation, I received recognition for the flexibility and future potential of Agents4Robots

Microsoft
Software Engineer Intern
May 2023 - August 2023 (4 months)
Redmond, Washington, United States

I worked with the Advanced Autonomy and Applied Robotics team in the Strategic Missions and Technology division. The team focused on exploring robotics applications and creating proof-of-concept projects for Microsoft's government mission users.

I developed an application on the Microsoft Teams Plugin platform, enabling users to remotely operate robots. Teleoperation commands were conveyed via WebRTC, while robot video streams utilized the Azure Communication Services Call SDK. I designed and built a user interface that allowed multiple users to collaboratively control several robots simultaneously.

I collaborated on this project with another intern, working closely and learning together. The team had previously built a POC of this idea, so the intern project was built from the ground up - with guidance from our manager, we made design decisions, started the repository, and progressed with a great degree of independence. We presented the final product at a team all-hands, and I received praise on my presentation skills, the application performance, and planning process.

Throughout my internship, I acquired essential networking concepts to work with WebRTC and ACS, learned to use ROS2 for robot communication, and honed my skills in C#/.NET to build upon previous versions of the application. I also refined my group brainstorming and project planning skills. I consistently received positive feedback on my code quality and thoroughness as an engineer, holding myself and the project to a high standard.

Hack4Impact
Software Developer
September 2022 - August 2023 (1 year)
Hack4Impact is a student club that develops free websites and apps for non-profit organizations.

Recently, my team and I collaborated with the Students for Environmental Concerns organization on campus to build a website outlining their argument for fossil fuel divestment. The website was built using the T3 stack, and included a database interface where users can explore the university's investment portfolio and carbon impact of each of its investments. I also developed an additional page featuring SEC's open letter and a petition form for students to sign, requesting university divestment.

During the Fall '22 semester, my team worked with KadaKareer, a Filipino organization that aids underserved students in exploring career options, gaining work experience and finding mentors. We developed a web-based platform using React and Nest.js hosting their apprenticeship program. I was responsible for implementing our platform dashboard designs and creating a reusable form component. Additionally, I established connections to our Firebase database through Nest.js endpoints.

Uber
SWE Intern
May 2022 - August 2022 (4 months)

Interned with Uber's Enterprise Billing team, which helps manage B2B transactions with Uber's partners (Walmart, Apple, Drizly, etc.). My project was a series of API endpoints serialized into the Google Protobuf format to query and sort through all billing invoices. Collaborated with another intern to connect these endpoints to a real-time analytics database. Also built matching UI that consumes this API using React and GraphQL.

Additionally, I experienced agile development in a team, helped with our support channel, and added to the product documentation. Under the guidance of my mentor, I learned how software development works on a large scale, how to create secure and reliable products, and how to work in a professional team.

Project Code Future Inc.
Frontend Web Developer
July 2021 - January 2022 (7 months)
Urbana-Champaign Area

Project Code Future organizes coding lessons for younger students in our area. I am a part of the team building the website where students can find and sign up for nearby classes, and tutors can start new branches.

I learned how to use the Vue frontend framework on the job to create the website for the nonprofit organization. I built the website's first page, and also used Vuelidate to add form validation to the whole site. Additionally, I had the chance to collaborate with a development team and learn how to work in the software development cycle using Git Issues.

Google
Google Computer Science Summer Institute Scholar

July 2021 - August 2021 (2 months)

Remote

A full explanation of my time in CSSI and my capstone project can be viewed here - https://bit.ly/my-time-in-google-cssi

Google's Computer Science Summer Institute (CSSI) Program is a selective 4-week bootcamp for rising college freshman interested in computer science. During the program, I learned from Google's volunteer instructors and engineers, and used the p5.js library to build my knowledge of Javascript. I also attended the program's workshops to learn more about Google's engineering programs and how to be a successful teammate and engineer. The program ended with a capstone project that I built and presented with my partner, where I used the p5.js library to replicate the arcade game Centipede.

STEM Enrichment Youth
Coding, Set Theory, and Physics Instructor
June 2020 - July 2021 (1 year 2 months)

As a volunteer instructor at STEMEY, I taught several middle- and high-school age students different topics in Competitive Programming, Physics, Introduction to Coding, Set Theory, and Introduction to Web Design. I taught larger classes with fellow volunteers, co-lead smaller asynchronous classes, and provided one-on-one tutoring. Teaching all of these subjects was a wonderful opportunity for me to gain a better understanding of each of them, and to introduce others to these fields that interest me so much.

Education

University of Illinois Urbana-Champaign
Master's degree, Computer Science · (August 2024 - May 2025)

University of Illinois Urbana-Champaign
Bachelor's degree, Computer Science · (2021 - May 2024)

Leigh High School
 · (2017 - 2021)

Stanford Summer Session
High School Summer College , Computer Science · (June 2020 - August 2020)