

# Zhiheng Zheng

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## EDUCATION

### University of Illinois at Urbana-Champaign

Bachelor of Science in Computer Science

May 2025

GPA: 3.91/4.00

- Dean's list: Fall 2023

## EXPERIENCE

### University of Illinois at Urbana-Champaign

Research Intern

Champaign, IL

August 2024 - Present

- Engaged in cutting-edge research at Professor Tong Hanghang's lab, focusing on integrating state-of-the-art Graph Neural Networks (GNN) with Large Language Models (LLM) to perform node classification in heterophily graph.

### University of Illinois at Urbana-Champaign

Research Assistant

Champaign, IL

August 2023 - Dec 2023

- Contributed to research within Prof. Tomasz Kozlowski's lab, advancing QA systems for nuclear science.
- Leveraged different types of knowledge graphs and large language model to optimize and enhance the functionality of the QA systems for nuclear science, leading to robust improvements in result quality.

### Geni LLC

Co-Founder / CTO

Champaign, IL

February 2023 - June 2024

- Initiated and successfully led the software development for the Geni app, integrating state-of-the-art language, image, and audio generation models into its core functionalities.
- Contributed to securing over \$20,000 in funding from iVenture
- Optimized team workflow and fostering a collaborative environment to ensure rapid deployment while maintaining app quality.

### Forward Data Lab

Research Assistant

Champaign, IL

May 2023 - August 2023

- Collaborated directly under the advisement of Prof. Kevin Chang in the development of an AI chatbot designed to streamline web search results.
- Designed a multi-step approach where the AI chatbot generates an optimized search query, performs a web search, and evaluates the top-rated answers for relevancy and accuracy.
- Implemented an AI agent capable of interacting with the targeted web pages.

## PROJECTS

### Scribe AR

January 2023 - Present

- Developed a state-of-the-art live Transcription web app and AR glasses with my group that radically improved interaction and accessibility for users.
- Maintained and updated web pages and live transcription applications

### Auto-hacker

May 2024

- Implemented an LLM agent that can autonomously hack websites. repo: <https://github.com/isaac-0414/auto-hacker>
- Developed a demo featuring 3 sandbox websites to showcase the agent's ability to identify and exploit security vulnerabilities in a safe and ethical manner.

### Universal KG

December 2023 - Now

- Established a new framework for constructing and querying knowledge graphs from textual data. repo: <https://github.com/isaac-0414/UniversalKG>
- Developed an ontology system and a hybrid approach combining textual and node embeddings for optimized query accuracy and relevance.

## SKILLS

- Software Development: C/C++, Python, HTML/CSS, JavaScript, TypeScript, Java, Swift, React.js, Node.js, Next.js, Express.js SQL, NoSQL, Redux, jQuery, Wordpress, Git
- Machine Learning: LLM, Pytorch, Pandas, Numpy, Scikit-learn, Tensorflow
- Game Development: Unreal Engine, Blender