

KATHERINE A. SICK

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EDUCATION

M.C.S. in Computer Science — University of Illinois at Urbana-Champaign Urbana, IL
Aug 2025 — Expected May 2027 | GPA: N/A

Focus: Software Engineering, Machine Learning, and Natural Language Processing

B.S. in Computer Science and Linguistics — University of Illinois at Urbana-Champaign Urbana, IL
Aug 2021 — May 2025 | GPA: 3.7/4.0

Relevant Coursework: Machine Learning, Data Mining, Database Systems, Software Engineering, Computational Linguistics, Computer Algorithms, Data Structures

Study Abroad: Japanese Language and Culture — Keio University Tokyo, Japan
Mar 2024 – Aug 2024 | GPA: 3.9/4.0

TECHNICAL SKILLS

Languages: Python, C++, C, Java, JavaScript, SQL, HTML/CSS

Frameworks & Tools: React, Next.js, Tailwind CSS, scikit-learn, PyTorch, Word2Vec, BERT, Docker, Git, VS Code

Other: Data Analysis, APIs, Machine Learning Pipelines, Web Development, Japanese (Intermediate proficiency)

PROJECTS

Classify — Course Catalog Platform (React, SQL, Python, Next.js) Aug 2024 — May 2025

- Developed a full-stack replacement for the university's legacy course catalog handling 100K+ courses
- Implemented SQL database schemas and RESTful APIs for efficient data retrieval and scalability
- Collaborated with a team of 4 to design intuitive React components and improve load times

Embedding Analysis of Gendered Language using BERT (Python, PyTorch, BERT) May 2025

- Designed NLP pipeline to quantify gender bias in job descriptions using contextual word embeddings
- Compared keywords against male/female embedding centroids to measure linguistic bias

Comparing Word Embeddings of Spam and Non-Spam Emails (Python, Word2Vec, scikit-learn) April 2025

- Trained Word2Vec models on Enron and TREC spam datasets to examine neighborhood similarity patterns
- Visualized vector differences between spam and non-spam corpora using dimensionality reduction techniques

UIUC Thrifting App (React, SQL, JavaScript) Sept 2024 — Dec 2024

- Built a web app enabling UIUC students to buy/sell items securely through user-authenticated listings
- Managed SQL database integration and implemented search and filter functionality in React front-end

Natural Disaster Risk Calculator — HackIllinois Hackathon (React, JavaScript, APIs) Feb 2023

- Created a web app that uses geolocation data and APIs to assess environmental risk scores for a given address

EXPERIENCE

Data Structures Teaching Assistant — University of Illinois Champaign, IL | Aug 2023 – May 2025

- Led weekly lab sessions and office hours for 400+ students using C++, Docker, VS Code, and Git
- Assisted in debugging, algorithm design, and code review to reinforce data structure concepts

Intern and Ambassador — Japan House at UIUC Urbana, IL | Aug 2024 – May 2025

- Organized student-focused programming and community events promoting Japanese arts and culture
- Maintained garden and facility operations while enhancing public outreach initiatives

LEADERSHIP & ACTIVITIES

League of Linguists — Secretary & Communications Officer Urbana, IL | Aug 2023 – May 2025

Association for Computing Machinery (ACM) — Member Champaign, IL | Aug 2023 – May 2025