

Hamza Khan

U.S. Citizen | khamhamza2293@gmail.com | Chicago, IL | (331)-903-0643

EDUCATION

UNIVERSITY of ILLINOIS CHICAGO

Bachelor's of Computer Science | GPA: 3.64, Deans List

Chicago, IL

Expected Graduation May 2027

EXPERIENCE

Research Intern - AI Applications for Power Systems

June 2024 - August 2024

UIC Internship Program

Chicago, IL

- Analyzed and benchmarked the performance of 6+ machine learning algorithms in power system applications, producing a comparative study to guide departmental research.
- Extracted and summarized methodologies from 18 academic papers, presenting insights on AI trends in energy systems to senior researchers in weekly meetings.
- Conducted a comprehensive evaluation of supervised, unsupervised, and deep learning models, identifying optimal approaches for forecasting, optimization, and fault detection.
- Enhanced technical communication and collaboration by sharing research findings with peers and supervisors, supporting the integration of results into department projects.

PROJECTS

Cloud Resume Challenge

August 2025

- Deployed a serverless resume website on AWS (S3, CloudFront, Route 53), achieving high availability and global reach.
- Integrated AWS Lambda and DynamoDB for backend visitor tracking, logging 50+ visits in the first month.
- Automated infrastructure provisioning with an AWS SAM template, streamlining deployment and scalability.
- Established CI/CD pipelines with GitHub Actions, reducing deployment time to under 2 minutes.

Solve24 Game

May 2025

- Built a full-stack web application where players solve mathematical expressions using four random numbers to reach target 24, enhancing problem-solving engagement.
- Implemented mathematical validation algorithms ensuring correct use of all four numbers, improving game fairness and complexity.
- Developed a responsive UI in React.js using hooks and context for efficient state management across multiple components.
- Designed a Node.js/Express.js backend with RESTful APIs for game management, move validation, and player statistics.

ACTIVITIES AND LEADERSHIP

Volunteer Coordinator

September 2020 - August 2024

ICNA Relief

Naperville, IL

- Coordinated and led bi-weekly food distribution, supporting 50+ families and strengthening volunteer teamwork.
- Contributed to fund-raising initiatives, helping raise over \$500,000 in donations for community relief efforts.

SKILLS

Programming: Python, C++, Java, C, JavaScript/TypeScript, SQL, HTML/CSS, React.js, Node.js, Express.js, OOP, RESTful APIs

Cloud & DevOps: AWS (S3, Lambda, DynamoDB, CloudFront, Route 53, SAM), Serverless Architecture, CI/CD, Docker, Git, Linux, Bash, Agile, Trello

Data & ML: Data Structures & Algorithms, Machine Learning Algorithms, Predictive Modeling, Data Analysis (Pandas, NumPy)