Dev Singh

(312) 869-9748 | dev@devksingh.com | linkedin.com/in/dev-singh4 | github.com/devksingh4

EDUCATION

University of Illinois Urbana-Champaign   Urbana, IL
Master of Computer Science   *Aug 2025 – May 2026*

Bachelor of Science in Computer Science (Minor in Business)   *Aug 2022 – May 2025*

EXPERIENCE

Capital One   McLean, VA
Software Engineer Intern   *June 2024 – August 2024*

- Optimized fraud detection for card transactions, cutting processing time 16% and saving $5M in operational costs.
- Unified automated and manual fraud decisioning into a single platform with shared-attribute linking, reducing the average handling time for queues with stringent SLAs and increasing investigation throughput.
- Implemented end-to-end testing frameworks, along with central error handling and logging systems, to increase application resiliency and enhance production support operations.

Caterpillar Inc.   Chicago, IL
Software Engineer Intern, Machine Learning Operations   *May 2023 – December 2023*

- Achieved an eightfold increase in supported throughput by leveraging an event-driven architecture, asynchronous I/O, multi-threaded operations, and Redis caching to enhance performance and scalability.
- Cut anomaly detection pipeline runtime by 86%, boosting service sales and improving operational efficiency.
- Prevented security breaches by implementing vulnerability scanning and regression testing CI/CD pipelines.

University of Illinois   Urbana, IL
Siebel School of Computing and Data Science Course Assistant   *January 2023 – Present*

- Rebuilt autograder with a Jenkins backend for systems programming course, improving maintainability and enabling easier addition of comprehensive test cases while reducing failed grading jobs.
- Assisted students with group assignments and course understanding while making textbook more accessible.

Zakti Security Labs   Naperville, IL
Software Engineer Intern   *May 2019 – April 2023*

- Reduced non-compliant and unauthorized accesses to regulated systems by 15% through development of full-stack tools that enable businesses to identify and mitigate data security issues in real time.
- Built an end-to-end encrypted file transfer portal for regulated businesses with stringent privacy requirements.
- Developed disaster response plans that enable business continuity and recovery for high-risk organizations.
- Performed security audits for clients using the NIST and OCTAVE cybersecurity frameworks to deter cyberattacks and ensure compliance with HIPAA and SOC2 standards.

PROJECTS

ACM @ UIUC Core   Aug. 2022 – Present

- Built a serverless, multi-region, platform for event management, merchandise sales, member services, and more with 99.99% uptime for 1000+ users. Integrated enterprise controls including auditing and application resilience.
- Improved cybersecurity posture by implementing fine-grained access controls and zero-trust security using Microsoft Entra ID and Cloudflare Access, along with custom internal tooling.

SKILLS

AWS {Neptune, Fargate, Lambda, S3, DynamoDB, EC2}, C++, Kafka, Kubernetes, GitHub, TypeScript, Node.JS, Python, React, Redis, SQL.