MUHAMMAD HAMZA SHAIKH

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Education

University of Illinois at Chicago — Chicago, IL
Bachelor of Science in Computer Science — *GPA 3.81/4.00*

Technical Skills

Languages: Python, Java, JavaScript, TypeScript, SQL, Go, C/C++, HTML/CSS
Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, Spring Boot, Tailwind CSS, JUnit, pandas
Tools & Technologies: AWS, VS Code, Git, GitHub, MongoDB, Docker, PostgreSQL, HashiCorp Vault, Ansible, Jenkins
Certifications: AWS Certified Cloud Practitioner, CompTIA Security+

Experience

OCC — **May 2025 – August 2025**
Security Engineer Intern & DevOps Intern — *Chicago, IL*
- Developed and maintained CI/CD pipelines using Ansible and Jenkins to provision and configure HashiCorp Vault clusters in AWS, enabling secure, automated secrets management for 200+ applications
- Automated privileged account provisioning, rotation, and recovery by building a Python script integrating with CyberArk REST APIs, eliminating 90% of manual account setup
- Created a Python-based recovery script to auto-reset CyberArk AIM on failed hosts, restoring secure credential access in under 5 minutes and reducing manual recovery effort by 80%
- Created internal tooling in Go to automate HashiCorp Vault secret management, reducing manual configuration overhead and improving deployment speed

University of Illinois at Chicago — **January 2024 – January 2025**
Undergraduate Teaching Assistant — *Palatine, IL*
- Reinforced core software engineering principles by teaching Java Object-Oriented Programming, design patterns, threading, and JUnit testing to help students build maintainable and efficient software
- Developed strong communication and mentoring skills by guiding students through complex technical concepts and troubleshooting, which contributed to a 15% increase in average quiz scores
- Facilitated collaborative team projects for groups of 4-5 students, promoting best practices in software reuse, modular design, and agile development

Harper College — **June 2024 – August 2024**
Software Engineer Intern — *Palatine, IL*
- Migrated the IT Service Catalog from Excel to a SQL Server database, enhancing data integrity and enabling scalable management of 300+ IT systems used by 500+ employees
- Built a full-stack Next.js web portal with real-time updates and integrated REST APIs, streamlining service request processing and improving user experience
- Deployed the solution to production, cutting IT response times by 50% and efficiently managing 200+ monthly requests from internal teams

Projects

Campus Connect | *Next.js, Node.js, React.js, TypeScript, MongoDB, Socket.io, Redis* — **July 2025**
- Developed a student matching app with Next.js, TypeScript, MongoDB, and OAuth via NextAuth.js, onboarding 500+ users in the first month.
- Built a discovery algorithm with filtering, like/reject actions, and real-time match detection, eliminating duplicate profiles and speeding 100+ daily searches by 40% with Redis optimization
- Implemented real-time messaging with Socket.io and Redis caching, achieving sub-100 ms latency, 99.9% reliability, and persistent conversation storage.

Quickreads | *JavaScript, React.js, Node.js, Express.js PostgreSQL, OpenAI API, AWS EC2* — **December 2024**
- Engineered an AI-driven summarization platform that converts saved articles into concise TL;DRs using the Pocket API, OpenAI GPT models, and Clerk authentication
- Architected a responsive React.js frontend and Node.js/Express backend with PostgreSQL, implementing JWT-based authentication for secure, real-time interactions
- Optimized and deployed the platform on AWS EC2 with auto-scaling, enabling 500+ concurrent sessions and delivering AI summaries in under 5 seconds

Relevant Coursework

Data Structures and Algorithms, Secure Web Application Development, Object-Oriented Programming, Cloud Computing, Database Systems, Machine Learning, Data Science, Systems Programming, Networking