

Khushi Gandhi

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EDUCATION

University of Massachusetts Amherst

Masters of Science in Computer Science

Expected: May 2026

GPA: 4/4

Relevant Coursework: Database Design, Advanced Algorithms, Computer Architecture, Information Retrieval

Manipal Institute of Technology, India

Bachelor of Technology in Information Technology

June 2018 - June 2022

GPA: 3.7/4.0

TECHNICAL SKILLS

Frontend: React, Vue, JavaScript/TypeScript, HTML/CSS

Backend & Systems: Java, Python, C++, Node.js, Spring Boot, REST APIs, Microservices

Databases & Infrastructure: MySQL, NoSQL, GraphQL, AWS(EC2, S3, DynamoDB), Docker, Kubernetes, CI/CD (Jenkins)

AI Technologies: LLM Integration, AI Agents, RAG, MCP Protocol, Prompt Engineering

EXPERIENCE

Graduate Teaching Assistant - Advanced Algorithms | UMass Amherst

September 2025 – Present

- Evaluated assignments and exams for 80+ students covering data structures, graph algorithms, and dynamic programming.
- Applied grading rubrics to evaluate code quality, complexity analysis, and algorithmic problem-solving skills.

Software Developer Intern | Interactive Brokers - Connecticut, US

June 2025 – August 2025

- Developed end-to-end features for Sales Portal using **Vue & JavaScript**, and deploying in production environments.
- Rebuilt breadcrumb navigation with centralized state management, reducing hardcoded logic across 20+ components.
- Built reusable dashboard components, providing 300+ internal users with real-time view of their accounts and contacts.
- Enhanced pagination system with manual page input and state persistence, improving navigation efficiency of tabular data.

Software Developer | Deutsche Bank - Pune, India

July 2022 – August 2024

- Collaborated with 50+ members in agile environment, participating in daily stand-ups, code reviews, and design discussions to deliver scalable fintech application that generates alerts for any anomalies during the onboarding of clients.
- Added 12+ end-to-end GraphQL and REST APIs using **Java, Spring Boot & SQL** to retrieve and display critical regional alerts for high-risk users by implementing request validation and error handling across multiple microservices.
- Improved workflow uptime by 30% by designing fallback mechanism in Apache Camel to handle third-party service disruptions.
- Automated report generation for any suspicious alerts raised using cron jobs, reducing manual effort by 40%.
- Fixed 25+ issues through testing, debugging, and observability tools such as Grafana, validated deployments in Jenkins CI/CD.
- Mentored 4 junior interns through code reviews and best practice guidance, enhancing collaboration and team productivity.

PROJECTS

IMDB Query Engine | *Java, SpringBoot, Maven*

- Built relational database system from scratch to efficiently process SQL-like queries on **70M+** IMDB records across 3 tables.
- Reduced disk I/O by developing custom LRU-based Buffer manager, improving storage efficiency and query throughput.
- Achieved **100x** query speedup by implementing B+ Tree index to improve clustered and unclustered searches.
- Designed core query operators (selection, projection, BNL joins, materialization) to support relational algebra execution.

SilentSpeak : Muted Speech Detection Using Jaw Motion | *C, Python*

- Developed phone control system to improve accessibility for users in noisy settings or with speech impairments.
- Applied Random Forest ML classifiers on jaw motion data, achieving **88%** accuracy during real-time demonstration.
- Awarded **Best Project** in the course that offers an inclusive solution where audio-based systems are impractical.

HONORS & ACHIEVEMENTS

- Granted 100% Learner Grant covering 9-course **AWS Cloud Institute** program to gain hands-on cloud development skills.
- Selected to represent college with a full scholarship to attend the **Grace Hopper Celebration (GHC) 2025 conference**.
- Certified as **AWS Cloud Practitioner**, validating expertise in cloud infrastructure and AWS core services.
- Earned *Honors* in two **CodePath** courses, mastering advanced data structures and full-stack React development.