Khushi Gandhi

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EDUCATION

University of Massachusetts Amherst   Expected: May 2026
Masters of Science in Computer Science   **GPA: 4/4**
Relevant Coursework: Database Design, Advanced Algorithms, Computer Architecture, Information Retrieval

AWS Cloud Institute (*Full Learner Grant Recipient*)   October 2025 - Present
Cloud Foundation and Developer Fundamentals

Manipal Institute of Technology, India   June 2018 - June 2022
Bachelor of Technology in Information Technology   **GPA: 3.7/4.0**
Relevant Coursework: Object Oriented Programming, Operating Systems, Distributed Systems

TECHNICAL SKILLS

Frontend: Vue, JavaScript/TypeScript, HTML/CSS
Backend & Systems: Java, Python, C++, Node.js, Spring Boot, REST APIs, Microservices
Databases & Infrastructure: MySQL, GraphQL, Database Architecture, AWS, 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 3 reusable dashboard components, providing 200+ 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 10,000 rows.

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 five 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 2 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.
- Reduced disk I/O by developing custom LRU-based buffer manager, improving storage efficiency and query throughput.
- Achieved **100×** query speedup by implementing B+ Tree index to improve clustered and unclustered searches.
- Designed core query operators (selection, projection, joins, materialization) to support relational algebra execution.

PersonaGPT : AI Powered Resume | *Python, OpenAI Library* ↗
- Developed AI-powered resume that answers any technical and behavioral questions based on candidate's profile data.
- Integrated **OpenAI** library with Gemini 2.0 Flash, for real-time responses, along with implementing rate-limiting safeguards.
- Automated follow-up by triggering Supabase edge functions via webhooks to send personalized emails upon interest detection.

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.

CERTIFICATIONS

AWS Certified Cloud Practitioner (Cloud Infrastructure) ↗   July 2025
Codepath Intermediate Technical Interview Prep (Algorithms & Data Structures) ↗   January 2025 - May 2025
Codepath React Web Development Course ↗   January 2025 - May 2025