

AKHIL NAKKA

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EDUCATION

George Mason University	Fairfax, Virginia
Master of Science (M.S) Computer Science, CGPA: 3.63	08/2023 - 05/2025
CMR College Of Engineering and Technology	Telangana, India
Bachelor of Technology in Computer Science Engineering, CGPA: 8.54	07/2018 - 06/2022

WORK EXPERIENCE

George Mason University	Fairfax, Virginia
Software Engineer, Learning Space Design	03/2024 - Present

- Engineered and enhanced a web application using C#, ASP.NET MVC, and JavaScript to manage campus buildings, classrooms, and technology specifications, improving accessibility for 500+ students and faculty.
- Integrated survey functionalities for gathering classroom feedback, enabling data-driven decisions on infrastructure improvements and optimizing resource management.

MAQ Software	Telangana, India
Software Engineer I	09/2022 - 07/2023

- Developed and maintained distributed **Spring Boot microservices** for a finance analytics platform, handling user authentication with OAuth2 + JWT and securing API endpoints.
- Improved query performance and reduced latency by 30% through deep analysis and optimization of complex PostgreSQL queries; implemented Redis caching for efficient access to frequently requested data.
- Created and managed **CI/CD pipelines** using **Git and Maven**, partnered with DevOps to containerize services in Docker and deploy to AWS EC2 with S3 integration for file storage.
- Collaborated in **Agile sprints**, participated in code reviews, and documented REST APIs using Swagger/OpenAPI to streamline integration with frontend and QA teams.

MAQ Software	Telangana, India
Associate Software Engineer	09/2021 - 09/2022

- Executed backend development of internal financial dashboard tools using **Java 8, Spring MVC, and Hibernate**, developing REST APIs and applying modular OOP design for maintainability.
- Wrote and executed **unit/integration tests** with **JUnit 5 and Mockito**, and documented endpoints using **Swagger**, improving QA collaboration and reducing integration issues across teams.

PROJECTS

Location-Based Task Management System

React.js, Node.js, Express, MongoDB, Leaflet.js, Tailwind CSS, Text-belt API, OpenAI GPT-3.5

- Created a full-stack MERN application leveraging Leaflet.js, MongoDB geospatial queries, and OpenAI GPT-3.5 to automate task verify and assignments based on user location, enhancing task completion rates by 35%.

Enterprise-Grade Microservices Backend with Spring Boot, Kafka, Docker, and Keycloak

Spring Boot 3, MongoDB, MySQL, API Gateway, Kafka, Docker, Flyway, Keycloak, Nginx

- Architected and delivered a scalable distributed Spring Boot 3 microservices based e-commerce backend using MongoDB/MySQL relational databases, containerized with Docker, used Flyway for relational DB migrations, and set up Nginx as a secure API reverse proxy in a distributed system environment.

Backend Microservices Deployment with Kubernetes & AWS

AWS, Docker, Kubernetes, Jenkins, Spring Boot

- Implemented a scalable Spring Boot-based student portal to Kubernetes clusters on AWS EC2 using Docker, integrated Jenkins for automated CI/CD, and used AWS RDS (MySQL) to persist student and course data, reducing manual deployment effort by 60%.

Backend API & Android Client Mobile App

Java, Android, JSP, MySQL

- Developed a 3-tier employee recognition system where managers could reward and track achievements via a Java/JSP web portal with MySQL backend and built an Android client using REST APIs for real-time interaction, enhancing engagement across 10K+ records.

SKILLS

Programming: Java, Python, C, C++, JavaScript, HTML, CSS, C#, ASP.NET MVC

Web Technologies: HTML, CSS, Bootstrap, ReactJS, RESTful API's, NodeJS

Tools and Frameworks: Spring Boot, Git, Docker, Kubernetes, AWS (Certified Cloud Practitioner, EC2, S3, RDS, Lambda), Jenkins, IntelliJ IDEA, Microsoft Power BI, Maven, Apache Kafka, Agile, .NET Framework 4.8, JIRA

Other Technologies: MongoDB, Microservices, RDBMS, NoSQL, MySQL, Microsoft SQL Server, PostgreSQL

CS Fundamentals: Strong grasp of data structures, algorithms, and system design; practiced through project