YUSUF JAMEEL

GenAI Full-Stack Lead Engineer | RAG & Agentic Systems Architect | MERN & Python Backend

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Professional Summary

GenAI Full-Stack Lead Engineer with 11 years of experience architecting scalable enterprise systems, agentic workflows, and production RAG pipelines. Expert in orchestrating multi-step AI agents, LLM integrations (OpenAI, Claude), vector search, and custom domain semantic layers. Specialized in modern full-stack development using Node.js, React, TypeScript, and FastAPI alongside AWS cloud infrastructure. Proven track record of guiding cross-functional engineering teams, accelerating AI adoption, and delivering high-impact, cloud-native products.

Core Technical Competencies

Python Backend Development

- RAG & Vector Search Architecture: Retrieval-Augmented Generation, vector embeddings, hybrid semantic search, multi-tenant compute isolation
- Agentic Systems & Workflows: Autonomous task orchestration, multi-step agent decision-making, n8n automation, human-in-the-loop validation
- FastAPI & Python Services: Async/await REST APIs, Pydantic type validation, schema-driven microservices
- Document & Data Ingestion: Automated ingestion, indexing, real-time chunk streaming, and versioned storage pipelines

Database & Data Integration

- AWS RDS: Relational database management, provisioning, scaling, and maintenance
- PostgreSQL: Advanced database design, optimization, and query performance tuning
- MongoDB: NoSQL database design, indexing, aggregation pipelines, and scaling
- AWS Athena: SQL queries on S3 data, data lake querying, analytics
- AWS S3: Object storage, data pipeline integration, file management

Full Stack Development

- Frontend: React.js (Hooks, Redux, Context API), Next.js, TypeScript, Tailwind CSS
- Backend: Node.js, NestJS, Express.js, TypeScript, RESTful APIs, Microservices
- AI & LLM Integration: OpenAI API, Claude API, n8n workflows, prompt engineering

DevOps & Cloud

- Cloud Platforms: AWS (Lambda, EC2, S3, API Gateway, RDS, Athena, CDK), GCP
- Containerization & Orchestration: Docker, Kubernetes
- CI/CD: GitHub Actions, Bitbucket Pipelines, automated deployment

- Monitoring & Observability: CloudWatch, performance optimization, logging

Professional Experience

FissionLabs, Pune

Lead GenAI & Full-Stack Engineer | MERN Stack | AWS Nov 2025 – Present

- Architecting and leading end-to-end full-stack development for GenAI platforms and AI agent architectures
- Directing frontend engineering with React.js/Next.js and backend microservices using Node.js and FastAPI to ensure seamless LLM integration and real-time streaming
- Mentoring engineering teams on AI-assisted development tools, prompt engineering, and secure cloud-native deployment practices

Coforge BPS Pvt Ltd, Pune

Senior Backend Engineer | MERN Stack | AWS | API Architecture May 2023 – Sep 2025

- Designed and implemented MERN stack applications delivering scalable, secure cloud-native solutions
- Built and optimized complex RESTful and GraphQL APIs; migrated monolithic systems to microservices with AWS Lambda serverless patterns
- Accelerated development velocity by 30% through AI-assisted coding practices using GitHub Copilot for code generation, documentation, and testing
- Built AI agents using n8n workflows integrated with OpenAI APIs to automate business processes, data processing, and intelligent decision-making
- Delivered CI/CD pipelines (GitHub Actions, Docker) for efficient testing, staging, and production releases
- Partnered with DevOps to deploy services on AWS with CDK, API Gateway, CloudFront and monitoring via CloudWatch

Virtusa Consulting Services, Pune

Lead Backend Developer | Cloud-Native Applications | MERN Stack Aug 2022 – Feb 2023

- Oversaw full lifecycle of cloud-native enterprise applications with MERN architecture, including React.js frontends and Node.js APIs with TypeScript
- Championed microservices, integrating AWS Lambda, API Gateway, RDS, and serverless-first design patterns
- Led implementation of CI/CD pipelines (Bitbucket), enhancing deployment velocity and reliability
- Strengthened system security through OAuth2/JWT and robust authentication layers
- Introduced AI-assisted development tools to improve team coding efficiency and code quality
- Experimented with n8n for workflow automation, exploring AI agent creation for internal process optimization

Chenoa Information Services, Mumbai

Senior Software Engineer | Backend-Focused | SaaS Platforms Aug 2020 – July 2022

- Directed backend engineering for data-driven SaaS solutions with React/Node.js stack integration
- Designed and maintained high-performing RESTful and GraphQL APIs for client-facing platforms

- Mentored junior developers, improving team technical maturity in cloud, security, and scalability
- Researched emerging AI technologies and their potential applications in SaaS product development

Broadstairs IT Solutions, Pune

Backend Developer / Tech Lead | Cloud & Microservices Jan 2019 – Aug 2020

- Led backend and infrastructure efforts for scalable MERN stack platforms
- Architected and deployed microservices on AWS, integrating React.js UIs with Node.js APIs
- Defined API-first contracts and led cross-functional teams through Agile delivery cycles

Earlier Experience: TailoredTech Solutions, Pune – Software Developer (Jan 2018 – Dec 2018); KPIT Technologies, Pune – Associate Software Engineer (Aug 2015 – Dec 2017)

Featured Projects

LifesArc

Role: Lead Engineer (Full-Stack & Architecture) | Duration: 9 months

- Led end-to-end delivery of LifesArc's membership platform, which helps older adults and their families coordinate everyday services with vetted providers
- Delivered the Next.js web app, React Native app, FastAPI services, and Terraform-managed AWS infrastructure as one delivery stream
- Ran AWS AI-DLC from requirement gathering to release, with spec-driven OpenSpec changes and human approval gates
- Kept requirements-to-release traceability across OpenSpec change specs, Jira, and GitHub
- Technologies: Next.js, React Native, FastAPI, AWS AI-DLC, Terraform, AWS, Python, Cursor, Claude

DaaX (LAKEer)

Role: Lead Engineer (Full-Stack) | Duration: 4 months

- Served as Lead Engineer for LAKEer, a SaaS platform, designing a Python and Node.js microservices architecture
- Architected and led orchestration of per-user isolated compute environments on AWS EKS, each provisioned with a dedicated RAG (Retrieval-Augmented Generation) pipeline
- Directed design of document ingestion and indexing workflows triggered on user uploads, feeding domain-specific RAG pipelines
- Led the architecture and orchestration of AI agents to answer user questions precisely based on uploaded documents using retrieval-augmented context
- Designed configurable domain-specific semantics and vocabulary layers (Oil & Gas, E-commerce, Agnostic), enabling custom jargon injection to enrich retrieval context and improve answer precision
- Led a team of engineers through design reviews and delivery, ensuring architectural consistency across the platform
- Technologies: Python, Node.js, Microservices, AWS EKS, Kubernetes, RAG, Agent Orchestration, ReactJS

MedGEO

Role: Lead Engineer (Frontend) | Duration: 3 months

- Built an admin portal enabling internal teams to aggregate job listings ingested from multiple external job portals

- Designed a microservices-based data pipeline to fetch, clean, and normalize job data before persisting it to the database
- Architected decoupled ingestion, cleaning, and storage services with explicit schemas, improving data consistency, scalability, and maintainability
- Technologies: Python, ReactJS, Microservices Architecture, Data Pipelines, Data Ingestion & Cleaning, Database Integration

Cloud Infrastructure Migration for Enterprise Application

Role: Senior Technical Consultant | **Duration:** 14 months

- Successfully led migration of high-traffic enterprise application to AWS, achieving 30% reduction in infrastructure costs
- Significantly improved scalability and system performance through cloud-native architecture
- Oversaw deployment automation through CDK and enhanced operational efficiency
- **Technologies:** AWS (EC2, Lambda, S3, CDK), Docker

Database Migration from On-Premises to Cloud

Role: Senior Technical Consultant | **Duration:** 8 months

- Directed end-to-end database migration to AWS Cloud, enhancing data accessibility and reducing maintenance costs by 20%
- Ensured data integrity and risk mitigation through careful planning and robust pipeline strategies
- **Technologies:** Node.js, TypeScript, NestJS, AWS RDS, PostgreSQL, Data Pipelines

Education

Bachelor of Engineering (Computer Science and Engineering)College of Engineering and Technology, Akola | June 2015

Certifications

- Fission Labs Start Award – 1st Quarter 2026 (Recognition for exceptional performance and technical leadership as Lead Engineer on the DaaX platform)
- Fission Labs Spot Award – March 2026 (Recognition for exceptional technical leadership and delivery excellence across multiple concurrent projects)
- AI Pair Programming with GitHub Copilot – Microsoft/GitHub
- Advanced Prompt Engineering Techniques – Professional Development
- Docker Foundations Professional Certificate

Leadership & Soft Skills

- Technical Leadership: Leading cross-functional teams and mentoring developers on best practices
- AI-Enhanced Development: Championing AI-assisted coding tools to improve team velocity
- Problem Solving: Analytical approach to complex system design and architectural challenges
- Cross-Functional Collaboration: Bridging technical and business teams for successful delivery
- Agile Excellence: Scrum methodologies and rapid iteration in fast-paced environments
- Continuous Learning: Passionate about emerging AI technologies and modern development practices