

ATIQUE AHMED

Principal AI Architect — Generative AI & Agentic AI | Engineering Leader (10-Person Team) | Enterprise & Solution Architecture

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PROFESSIONAL SUMMARY

Principal AI Architect with 12+ years across enterprise software, cloud architecture, and applied AI, including 3+ years building production Generative AI and Agentic AI systems. Architect of CAP (Cube Agentic Platform), an enterprise multi-agent platform built for Toyota on AWS Bedrock and AgentCore covering governance, orchestration, runtime, memory, and observability, and of production RAG pipelines (hybrid retrieval, re-ranking, grounded citations, evaluation harnesses) serving regulated enterprise workloads. Engineering leader currently accountable for a 10-person engineering and architecture team across multiple concurrent client programs, owning hiring, performance management, delivery roadmaps and OKRs, cloud cost and vendor budgets, and production on-call. Previously managed teams of up to 25 engineers and QA across 8+ concurrent products. Chairs architecture review boards, sets target-state architecture, presents to client and executive stakeholders, and mentors senior engineers while remaining hands-on in code.

CAREER HIGHLIGHTS

Enterprise agentic platform. Architected CAP, a governed multi-agent platform for Toyota now used as the reusable foundation for multiple client AI programs.

Engineering leadership. Leads a 10-person engineering and architecture team today; previously led 25+ engineers and QA across 8+ concurrent products. Owns hiring, reviews, budgets and vendor relationships; mentored engineers into roles at leading tech companies.

Developer influence. Principal-level developer advocate at Zoom, shipping AI features across Meetings, Chat and Contact Center and publishing demos for the developer ecosystem.

Production RAG at scale. Shipped hybrid-retrieval RAG with re-ranking, citations and evaluation gates, raising answer grounding for regulated enterprise workloads.

Platforms at national scale. Delivered a fully serverless headless CMS powering 9+ high-traffic news properties on AWS.

Recognition. Guinness World Record participant and TechGig top-10 programmer (2017); published IJSRD research paper.

PORTFOLIO, PROFILES & COMMUNITY

PORTFOLIO	atiqueahmed.com — architecture write-ups, project case studies and demos
LINKEDIN	linkedin.com/in/iamatiqueahmed
GITHUB	github.com/codeztech-atique — GenAI, agentic AI and full-stack open-source work
YOUTUBE — CODEZTECH	youtube.com/c/codeztech — developer tutorials on cloud, AI and full-stack engineering
TECHNICAL BLOG	codeztech.in — engineering articles and how-to guides
LEETCODE	leetcode.com/codeztech-atique — 50 Days badge, DCC November 2025
HACKERRANK	hackerrank.com — profile
TECHGIG	techgig.com/iamatiqueahmed — top-10 programmer, 2017
STACKBLITZ	stackblitz.com/@codeztech-atique — live code samples

CORE SKILLS

AGENTIC AI	Multi-Agent Systems (MAS), agent orchestration (sequential, parallel, hierarchical, event-driven), supervisor/router and planner-executor patterns, ReAct and plan-and-execute reasoning, tool and function calling, deterministic tool contracts, agent-to-agent (A2A) protocols, Model Context Protocol (MCP) servers and clients, AWS Bedrock AgentCore Runtime, AWS Strands Agents SDK, LangChain, LangGraph, LangSmith, Llamaindex, CrewAI, AutoGen, n8n, human-in-the-loop approval gates, agent lifecycle governance, guardrails and policy enforcement (RBAC/ABAC, PII redaction, prompt-injection defense), agent memory (session, long-term vector, workflow state), retries and failure recovery, cost and token governance, agent evaluation and reasoning-trace observability
RAG & RETRIEVAL	End-to-end RAG pipeline design, document ingestion and parsing (PDF, HTML, tabular), semantic and layout-aware chunking, metadata enrichment and filtering, embedding model selection, vector databases (OpenSearch/Elasticsearch kNN, Bedrock Knowledge Bases, pgvector, FAISS, Pinecone), hybrid search (BM25 + dense) with reciprocal rank fusion, cross-encoder re-ranking, query rewriting and multi-query expansion, HyDE, GraphRAG and knowledge-graph traversal, agentic and corrective RAG, contextual compression, grounded answers with citations, hallucination mitigation, RAG evaluation (faithfulness, answer relevance, context precision/recall), incremental re-indexing
GENAI PLATFORM	AWS Bedrock, Google Vertex AI, OpenAI and Anthropic APIs, LLM fine-tuning and model selection, model-agnostic routing, prompt engineering and prompt versioning, structured output and JSON schema enforcement, streaming inference, semantic caching, LLM observability and telemetry, offline and online evals, red-teaming, responsible AI and compliance controls, MLOps/LLMOps
LANGUAGES	Node.js and TypeScript (primary), JavaScript (ES6+), Python, Java, PHP, SQL, HTML5, CSS3/SCSS
BACKEND	Node.js, NestJS, Express, TypeScript, Python (FastAPI, Flask), Java Spring Boot, REST and GraphQL API design, WebSockets, gRPC, microservices, serverless architecture, OAuth 2.0, OIDC, JWT, SAML, SSO, API gateways, caching, rate limiting, data structures and algorithms, system design, concurrency, multi-tenant SaaS and PaaS architecture
FRONTEND	Angular 20+, React, TypeScript, RxJS, state management (NgRx/Redux), micro-frontends, component libraries and design systems, responsive and accessible UI (WCAG), SCSS, Tailwind, Webpack, Vite, Jest, Cypress, Core Web Vitals and performance optimization
EVENT-DRIVEN SYSTEMS	Event-driven architecture, Apache Kafka (topics, partitions, consumer groups, streaming pipelines), AWS EventBridge, SNS, SQS, Step Functions, pub/sub and message queues, event sourcing and CQRS, idempotency, retries and dead-letter queues, distributed systems, distributed tracing, scalability and resilience patterns
CLOUD	AWS (Lambda, API Gateway, Step Functions, EventBridge, SQS, SNS, SES, DynamoDB, S3, CloudFront, Route 53, Cognito, EC2, ECS/Fargate, ELB, VPC, IAM, KMS, Secrets Manager, CloudFormation, CloudWatch, X-Ray, Amplify, Bedrock, OpenSearch), GCP (Vertex AI), Azure fundamentals, VMware Cloud, cloud cost optimization (FinOps)
DEVOPS & PLATFORM	Docker and containerization, Kubernetes (deployments, services, Helm, autoscaling), Terraform, CloudFormation, Infrastructure as Code, Jenkins, GitLab CI/CD, GitHub Actions, AWS CodePipeline and CodeCommit, SonarQube, Git, blue-green and canary releases, observability (CloudWatch, X-Ray, OpenTelemetry, Grafana, Kibana), SRE, SLIs/SLOs, error budgets, DORA metrics, on-call and incident response, chaos and load testing, secrets management, DevSecOps
ENTERPRISE & ITSM	ServiceNow (incident, change and request workflows, integrations), ITSM, ITOM and ITCM processes, ITIL-aligned service delivery, CMDB, Jira and Confluence, Microsoft Active Directory and Entra ID (Azure AD), LDAP, enterprise SSO and identity federation, Okta, AWS Cognito, RBAC/ABAC access governance, SOC 2, GDPR, DPDP compliance
DATA	MongoDB, PostgreSQL, DynamoDB, MySQL, Redis, Elasticsearch, OpenSearch, Kibana, Logstash, Filebeat, ELK stack, data modeling, search relevance tuning, data pipelines
ENTERPRISE ARCHITECTURE	Enterprise, solution and integration architecture, target-state and reference architectures, business capability mapping, application portfolio rationalization, domain-driven design, C4 model, TOGAF and ArchiMate-aligned practices, architecture review boards (ARB), architecture decision records (ADR), technology standards and principles, architecture governance, non-functional requirements, build-vs-buy and vendor evaluation, total cost of ownership, technology roadmaps, legacy modernization, cloud migration and multi-cloud strategy, API and platform strategy, data governance, disaster recovery and business continuity, AWS Well-Architected reviews, technical due diligence
ENGINEERING LEADERSHIP	Engineering management and org design, team building, hiring and interviewing, onboarding, headcount and capacity planning, 1:1s, performance reviews and career ladders, mentorship and coaching, succession planning, roadmap and OKR ownership, portfolio and program delivery, budget and vendor management, cost optimization, cross-functional and stakeholder management, executive and C-level communication, Agile, Scrum and SAFe, sprint and release planning, delivery metrics (DORA), SLAs and SLOs, on-call and incident management, postmortems, engineering standards and code quality, risk management, change management, distributed and remote team leadership
DEVELOPER RELATIONS	Developer advocacy and evangelism, developer experience (DX), SDK and API design feedback loops, technical content creation (blogs, docs, code samples, reference apps), conference talks and webinars, workshops and hackathons, community building and moderation, open-source contribution, developer onboarding and time-to-first-call reduction, product feedback loops to engineering, go-to-market and launch enablement, technical writing, public speaking, video tutorials (YouTube/Codeztech)

PROFESSIONAL EXPERIENCE

Principal AI Architect (GenAI + Agentic AI) & Engineering Leader — HNC Pvt Ltd (Deloitte) Oct 2025 – Present

Kolkata, India

Leadership & delivery ownership

- Lead a 10-person engineering and architecture team spanning AI/platform engineering, backend, frontend and QA across multiple concurrent client programs.
- Own hiring and interviewing, onboarding, 1:1s, performance reviews and career development for the group; mentor senior engineers and tech leads.
- Accountable for delivery roadmaps and OKRs, sprint and release planning, capacity planning, and executive and client-facing status reporting.
- Own platform budget and cloud cost governance (model, token and infrastructure spend) plus vendor and partner management for AI tooling.
- Chair the architecture review board — architecture decision records, technology standards, non-functional requirements and design sign-off across programs.
- Own production readiness: on-call rotation, incident management, postmortems, SLOs and reliability standards for AI services.

CAP — Cube Agentic Platform | Enterprise GenAI Multi-Agent System (MAS) for Toyota — reusable, enterprise-grade Agentic AI platform enabling teams to design, govern, publish, and operate multi-agent solutions across Toyota and other client programs.

- Architected CAP across five layers — Governance, Orchestration, AgentCore Runtime, Memory, and Observability — with multi-tenant isolation, compliance controls, and reusable blueprints for new agent programs.
- Designed a scalable AgentCore Runtime handling multi-agent coordination, asynchronous reasoning loops, tool execution, and structured agent-to-agent interactions.
- Implemented orchestration patterns for sequential, parallel, and event-driven AI workflows across distributed services using Step Functions, EventBridge, and SQS.
- Built a centralized Governance & Control Plane with agent lifecycle management (Draft → Review → Approved → Production), versioning, and controlled rollout.
- Enforced policy-based guardrails (RBAC/ABAC) for model access, tool invocation, prompt safety, and tenant isolation.
- Standardized an Agent Action framework with deterministic tool contracts, schema validation, retries, timeout handling, and failure recovery.
- Engineered a reusable enterprise RAG pipeline — ingestion, semantic chunking, metadata-filtered hybrid retrieval, cross-encoder re-ranking, and citation-grounded synthesis — shared as a managed capability across agent teams.
- Built structured memory architecture spanning session memory, long-term vector memory, and workflow state memory to support multi-turn, long-running investigations.
- Enabled model-agnostic execution via AgentCore integrated with AWS Bedrock, including model routing and cost/token governance.
- Integrated Model Context Protocol (MCP) servers to securely expose MAS capabilities to external enterprise systems and cross-agent ecosystems.
- Implemented enterprise observability and telemetry capturing reasoning traces, token usage, tool-execution metrics, retrieval quality signals, and audit logs.

SCX — Enterprise GenAI Supply Chain Intelligence Platform (Toyota)

- Led architecture and delivery of AI-powered supply-chain intelligence enabling natural-language querying, reasoning, and decision support over complex supply-chain data.
- Built Graph and Reasoning Agents combining structured graph traversal (GraphRAG) with LLM-based synthesis for multi-hop questions.
- Integrated hybrid retrieval plus reasoning to materially improve answer accuracy, relevance, and grounding.
- Designed orchestration for long-running and asynchronous AI workflows, with contextual memory across multi-step investigations.
- Delivered full audit logging, explainability metadata, and agent-action tracing to meet Toyota enterprise reliability and governance standards.

Technologies: AWS Bedrock, AgentCore Runtime, Multi-Agent Systems, MCP, LangChain, LangGraph, LangSmith, RAG architecture, vector databases, Elasticsearch, DynamoDB, Lambda, API Gateway, Step Functions, EventBridge, SQS, RBAC/ABAC, guardrails, CloudWatch, X-Ray, microservices.

Developer Advocate (Principal Engineer) — Zoom

Feb 2024 – Aug 2025

India

- Led initiatives bridging core Zoom products with modern AI capabilities, enabling developers to build scalable, intelligent solutions on Zoom SDKs and APIs.
- Engage AI:** architected an AI-driven ticketing enhancement system for ServiceNow-style workflows with embedding-based deduplication, sentiment tracking, and LLM summarization to improve escalation handling.
- Zoom Virtual Agents:** designed and optimized virtual-agent solutions automating customer support in Zoom Contact Center — intent recognition, contextual NLU, multi-turn dialogue management, and RAG-backed knowledge retrieval across voice, chat, and video.
- Zoom AI Companion:** contributed AI productivity features across meetings and chat — smart summarization, action-item extraction, and RAG-based contextual Q&A.
- Built agentic AI workflows with RAG pipelines for blog automation, customer sentiment analysis, and proactive support, including retrieval evaluation to reduce hallucinated responses.
- Prototyped Generative AI use cases combining AWS Bedrock LLMs with Zoom SDKs; published demos, code samples, and technical content for the developer community.

Technologies: Node.js, TypeScript, Spring Boot, React, Angular 18+, AWS Bedrock, Lambda, API Gateway, S3, SES, SNS, Cognito, CloudFront, CloudWatch, X-Ray, MongoDB, PostgreSQL, Elasticsearch, Docker, SonarQube, VMware Cloud, Zoom Meeting/Video SDK/Contact Center/Chat/Virtual Agent.

Head of Technology & Co-Founder — Clothovia (Part-Time)

Feb 2024 – Sep 2025

Remote / Kolkata, India · Part-time venture alongside full-time role

- Architected and operated the end-to-end e-commerce platform, combining cloud-native architecture, AI-driven automation, and data-backed growth strategy.
 - Built agentic AI workflows for automated content generation, product synchronization, and operational automation, with retrieval over product catalog and trend data.
 - Implemented AI-powered blog automation driven by Google Trends insights, structured on a 70% product-category / 20% storytelling / 10% success-story content strategy.
 - Developed scalable backend services and event-driven pipelines for inventory, order, and marketing workflows.
 - Integrated structured data, schema markup, and SEO/GEO strategies to improve search visibility and indexing performance.
 - Ran performance-marketing campaigns with analytics-driven targeting across Google Ads and Meta; owned roadmap, automation, and platform scalability.
- Technologies:** Node.js, MongoDB, AWS Bedrock, Lambda, SQS, Step Functions, S3, CloudFront, CloudWatch, SES, SNS, Cognito, Angular 20+, Shopify, n8n, Make.com, Zapier, Google Tag Manager, Search Console.

Lead Full-Stack Developer — VMware

May 2021 – Dec 2023

Remote, India

- Led engineering for multiple internal enterprise platforms, owning architecture, technical direction, and delivery across cross-functional teams.
- Designed and delivered scalable microservices using Java Spring Boot and Node.js, plus enterprise frontends in React and Angular 14+.
- Introduced AI-driven features including NLP sentiment analysis, text summarization, and intelligent automation using TensorFlow, Hugging Face, and IBM Watson.
- Explored early Generative AI and retrieval-augmented knowledge-management use cases for internal support systems.
- Architected secure APIs on AWS API Gateway and Lambda with event-driven patterns (SNS, SES, S3); owned deployments across VMware Cloud and AWS with Docker.
- Established observability standards (CloudWatch, centralized logging, dashboards) and CI/CD practices via GitLab pipelines and SonarQube.
- Drove sprint planning, code reviews, production releases, and stakeholder translation of business requirements into technical plans.

Lead MEAN Stack Developer — Asianet News Media & Entertainment Pvt Ltd

Feb 2019 – May 2021

Bangalore, India

- Architected and delivered a fully serverless Headless CMS on Angular 8+ and Node.js powering 9+ high-traffic national news properties.
- Owned the complete lifecycle — design, development, deployment, and production support — as lead and hands-on contributor.
- Built backend services on Lambda and API Gateway with event-driven SNS integrations; modeled data in DynamoDB and Elasticsearch with Kibana analytics.
- Managed content delivery via S3 and CloudFront; automated CI/CD with CodePipeline, CodeCommit, and CloudFormation.
- Implemented tracing and monitoring with X-Ray and CloudWatch, and authentication with AWS Cognito.

Lead Developer — Datanow Solutions LLP

Jun 2017 – Feb 2019

Bangalore, India

- Managed a cross-functional team of 25+ engineers, QA, and product managers, delivering 8+ concurrent projects on a unified backend platform.
- Architected and maintained a shared Node.js backend serving 8+ Angular 6+ frontend applications with modular, reusable components.
- Implemented microservices with Dockerized deployments; optimized MongoDB and Elasticsearch for high-performance search and analytics.
- Integrated the full ELK stack for centralized logging and monitoring; built GIS features with Mapbox GL for clustering and geospatial visualization.
- Managed AWS infrastructure (EC2, S3, SNS, SES) provisioned with Terraform; established CI/CD via Jenkins and Bitbucket.

MEAN Stack Developer — Let Me Find E-Services Pvt Ltd

Jan 2016 – Apr 2017

Bangalore, India

- Built a scalable e-commerce portal: RESTful Node.js APIs for product, order, and user workflows, and Angular frontend features.
- Designed MongoDB data models with Elasticsearch and Kibana search; deployed on AWS EC2, S3, and SES with Dockerized microservices.

Software Developer — Tangent Pro

Jan 2015 – May 2015

Bangalore, India

- Contributed full-stack development in Angular and Node.js across design, implementation, testing, and production support.
- Developed RESTful APIs and business logic; modeled data in MongoDB and Elasticsearch; deployed on AWS EC2, S3, and SES.

Software Developer — Pathbrekerz Technology

Aug 2011 – Mar 2012

Kolkata, India

- Developed responsive, database-driven web applications using HTML, CSS, Bootstrap, JavaScript, Ajax, and PHP with MySQL.
- Implemented dynamic form handling, authentication flows, and CRUD operations; deployed and maintained applications on AWS EC2.

SELECTED PROJECTS

- CAP — Cube Agentic Platform (2025 – 2026):** Enterprise multi-agent platform for Toyota spanning governance, orchestration, AgentCore runtime, memory, and observability, with agent lifecycle approval workflows, RBAC/ABAC guardrails, MCP-exposed capabilities, and a shared RAG service reused across agent programs. AWS Bedrock, AgentCore, Strands Agents, LangGraph, MCP, Step Functions, EventBridge, DynamoDB, OpenSearch, Node.js, TypeScript, Python.
- SCX — Supply Chain Intelligence, Toyota (2026):** Natural-language reasoning and decision support over supply-chain data using Graph and Reasoning Agents (GraphRAG + hybrid retrieval), contextual memory for multi-step investigations, and full agent-action tracing for enterprise audit. AWS Bedrock, LangGraph, LangSmith, Elasticsearch, Lambda, Step Functions, AgentADB.
- Enterprise RAG Evaluation Harness (2026):** Reusable offline and online evaluation pipeline for CAP retrieval quality — faithfulness, answer relevance, and context precision/recall scoring, regression gates in CI, and dashboards tracking hallucination rate and retrieval drift across agent releases. Python, RAGAS-style metrics, LangSmith, OpenSearch, GitLab CI/CD, CloudWatch.
- Agentic ITSM Automation (2026):** Agentic workflow layer over ServiceNow-style ITSM — automated triage, semantic deduplication, CMDB-aware enrichment, and change-request drafting with human-in-the-loop approval gates. Node.js, TypeScript, AWS Bedrock, MCP, Kafka, EventBridge, ServiceNow APIs, Entra ID SSO.
- Zoom Engage AI (2025):** Generative and Agentic AI automation for support ticketing — deduplication, sentiment tracking, and RAG-based summaries to speed escalation and resolution. Node.js, MongoDB, AWS Bedrock, Lambda, API Gateway, GitLab CI/CD.
- Zoom Virtual Agents (2025):** Multi-channel automated support with intent recognition, contextual NLU, multi-turn dialogue, and Elasticsearch-backed knowledge retrieval. Node.js, TypeScript, AWS Bedrock, DynamoDB, Zoom SDKs.
- Zoom AI Companion (2025):** Real-time meeting summarization, action-item extraction, and RAG contextual Q&A across meetings and chat. Node.js, TypeScript, AWS Bedrock, Lambda, DynamoDB.
- Walmart Astro (2022):** Order-lifecycle diagnostics modules (create order, move order) on a serverless stack. Angular, Node.js, Elasticsearch, DynamoDB, Lambda, API Gateway.
- Asianet News Headless CMS (2019):** Fully serverless CMS for 9+ national news domains. Angular, Node.js, DynamoDB, Elasticsearch, Lambda, API Gateway, CloudFront, X-Ray.

EDUCATION

Master of Computer Applications (MCA) — Visvesvaraya Technological University (The Oxford College of Engineering), Bangalore, India | 2012 – 2015 | 75%

Bachelor of Computer Applications (BCA) — Pailan College of Management & Technology, Kolkata, India | 2008 – 2011 | 75%

CERTIFICATIONS

- AWS Cloud Technical Essentials** — Amazon Web Services (2024) · [certificate](#)
- VMware SaaS Essentials** — VMware (2022) · [certificate](#)
- PHP & MySQL** — IIT Bombay (2015) · [certificate](#)
- CCNA** — Networkers Home (2013) · [certificate](#)

AWARDS & RECOGNITION

- Guinness World Record** — certificate awarded via TechGig's world-record coding event (2017) · [details](#)
- Top-10 Programmer, TechGig Code Gladiators** — national coding competition, June 2017 · [certificates](#)
- Published research, IJSRD** — "Swift Statistic Examiner with Packet Generator & Distribution Graphs" (2015) · [paper](#)
- LeetCode** — 50 Days Badge and DCC November badge (2025)

LANGUAGES

English (professional) · Hindi (native) · Bengali (native)