

AYMAN PATEL

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Professional Summary

Senior backend and full-stack engineer with 6+ years of experience building production APIs with event-driven microservices, cloud-native platforms and dynamic UIs in payments environments. Strong Java/Spring foundation with hands-on Go microservice experience. Known for owning reliability work end to end: resilient service patterns, production incident diagnosis, and platform capabilities consumed by multiple teams. Avid blogger with 40+ articles on all things software engineering. Skilled Visa sponsorship needed.

Education

Queen Mary University of London

MSc Advanced Computer Science

London, UK

September 2025 - September 2026

Sardar Vallabhbhai Institute of Technology

Bachelor of Computer Science, GPA: 7.9/10

Gujarat, India

July 2015 - May 2019

Work Experience

Nebius Academy

AI Engineering Fellow

March 2025 - May 2025

London, UK

- Deployed production-ready LLM inference services with vLLM, Docker, and Kubernetes on Nvidia H100 infrastructure, improving reliable operation and scalable serving.
- Orchestrated AI agents using LLM APIs, MCPs, reasoning pipelines, RAG, and test-time compute scaling for factual retrieval and workflow automation.
- Analyzed transformer architecture and inference optimization patterns, including KV-cache, MoE, RoPE, and LoRA fine-tuning.

Mastercard

Senior Software Engineer

March 2024 - August 2025

Vadodara, India

- Engineered backend APIs with Spring, Spring Data JPA, and Hibernate across cloud-native microservices, applying API Gateway and Event Sourcing patterns for scalable service integration.
- Hardened Resilience4j Circuit Breaker and Retry patterns across 5+ microservices, reducing cascading failures and improving system availability by 15%.
- Diagnosed production incidents using Splunk, Grafana, and Dynatrace, reducing mean time to resolution and improving service operability.
- Instrumented frontend observability with Grafana and OpenTelemetry to surface client-side performance and traceability insights for product teams.
- Benchmarked load and performance with k6 and InfluxDB to track service trends, regressions, and latency under pressure.
- Translated product manager requirements into technical specifications, user stories, and acceptance criteria for cross-functional engineering teams.
- Coordinated cross-country delivery as de facto frontend architect, UX designer, and product manager, aligning engineering, product, and stakeholder needs end to end.

Mastercard

Software Engineer II

March 2022 - February 2024

Vadodara, India

- Shipped greenfield applications in React, Redux, JavaScript, and Spring while maintaining performance, code quality, and accessibility standards across frontend projects.
- Expanded unit, integration, and end-to-end testing with Jest, React Testing Library, Playwright, and Cypress, reaching 95% test coverage and preventing regressions at scale.
- Accelerated CI end-to-end suite runtime from 8 hours to 3 hours through test splitting, parallel execution, selective retries, and environment-level caching.
- Be an accessibility champion by providing support to 10+ teams to be compliant for Section 508Ad
- Governed RBAC and SBAC implementation across 5+ products under a two-week deadline, covering application logic and access-control behavior across the stack.

Mastercard

Software Engineer I

July 2019 - February 2022

Vadodara, India

- Automated BPM workflows through RESTful APIs using Camunda, BPMN, DMN, and CMMN standards.
- Secured mobile encryption flows by maintaining Hardware Security Module integration for MDES tokenisation and card data transmission.

- Configured CI/CD pipelines to deploy Angular.js applications using Grunt.js and Jenkins.

Mastercard

January 2019 - June 2019

Software Engineering Intern

Vadodara, India

- Implemented a backend image-serving service for MDES's CardArt project, improving delivery efficiency for serving card images in MDES APIs.
- Optimized image delivery with ImageMagick compression before serving, reducing payload size and improving response times.
- Enabled non-blocking image delivery using Spring WebFlux and Reactive Streams to support scalable, asynchronous request handling.
- Practiced Test-Driven Development (TDD) to define expected behavior upfront, improve code reliability, reduce regressions, and support safe refactorings.

Personal Projects

[Go Microservices](#) | *Go, distributed tracing, containers*

- Implemented an end-to-end cloud-native microservice in Go with service discovery, distributed tracing, and containerized deployment, directly aligning with Teya's Go, platform services, and distributed-systems stack.

[Cloud Native Go](#) | *Go, CI/CD, infrastructure-as-code*

- Composed Go microservices for cloud-native environments with CI/CD pipelines, observability, and infrastructure-as-code patterns.

[LGTM Observability](#) | *Grafana, Loki, Tempo, metrics, eBPF*

- Instrumented end-to-end observability with Grafana, Loki, Tempo, metrics, tracing, profiling, flamegraphs, and eBPF for user and kernel-level insight.

[Nebius Repository Summarizer](#) | *FastAPI, LLMs, AST, Tree-sitter*

- Assembled a FastAPI and LLM service that summarizes GitHub repositories by extracting code skeletons through AST and Tree-sitter, prioritizing source files, and fitting context within a 7000-token budget.

Hackathons

Encode Hackathon, London | *3rd place*

- Prototyped Phantom Fraud, an AI-powered financial risk engine for Solana using Solana CLI, OpenRouter, and Helius APIs to detect wash-trading patterns.

AI Hackathons, Vadodara | *2nd and 3rd place*

- Delivered a fine-tuned Gemini Pro Vision code-review assistant with a PostgreSQL-backed developer UI, and launched a RAG-based internal documentation search using LangChain and Chroma.

Technology Hackathon | *2nd place*

- Migrated a React application to Next.js, improving page performance under hackathon delivery constraints.

Writing

Personal Blog | *Blog and Portfolio*

- Published 40+ technical articles on backend/frontend architecture, system design, eBPF, microfrontends, change data capture, Redis, infrastructure-as-code, RAG, and LLM observability.

Engineering Whitepapers | *Accessibility and microfrontend architecture*

- Authored company-wide engineering whitepapers adopted as internal reference material, circulated to 200 engineers, and recognized by the CTO.

Technical Skills

Backend: Go, Java, Spring, Spring Data JPA, Hibernate, FastAPI, REST APIs, Microservices, Event Sourcing, CQRS

Cloud & Infrastructure: AWS, Docker, Kubernetes, Terraform, Jenkins, Gradle, PCF, Localstack, Ansible

Events & Data: Kafka, RabbitMQ, Debezium, PostgreSQL, Oracle, MongoDB, Redis, SQL, NoSQL

Observability: Grafana, Prometheus, Loki, Tempo, OpenTelemetry, Splunk, Dynatrace, eBPF, k6

Testing: JUnit, Mockito, Jest, React Testing Library, Cypress, Playwright, Testcontainers

Frontend: React, TypeScript, Redux Toolkit, RTK Query, Next.js, Vite, Webpack, Module Federation, Figma

AI/ML: PyTorch, LLM APIs, LangChain, Chroma, RAG, Vector Databases, Transformers, LoRA, MLflow