

ACHHAYA PATHAK

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SUMMARY

IIT Guwahati MS graduate & Backend Engineer with **3 years** of experience building production systems at scale. Architected and shipped(0→1) a marketplace (Node.js, PostgreSQL, Redis) **serving 100K+ monthly requests at 99.99% uptime**. Proficient in **distributed systems**, **cloud infrastructure** (AWS/GCP), and full-stack deployment with **Docker and CI/CD**.

EDUCATION

Indian Institute of Technology, Guwahati

Jul 2021 – Jul 2023

MS in Mathematics and Computing • CGPA: 8.0/10 • Data Structures & Algorithms, DBMS, Computer Networks

EXPERIENCE

Marlin

Apr 2025 – Present

Software Engineer | Remote

- Built an autonomous LLM-driven trading AI agent that executes fully automated token trades on Hyperliquid, processing real-time market data with **sub-2000ms decision latency(p95)**.
- Architected a **fault-tolerant microservices system** (Executor/Evaluator/Flusher) using RabbitMQ, enabling horizontal scalability, fault isolation, and zero-downtime **processing 50+ real-time market signals per minute**.
- Designed resilient queue-based orchestration with ack/nack semantics, retries, and auto-reconnect mechanisms, **reducing system failures by 99.9%**(~1000 → 2 per month) in AI-driven decision pipelines.
- Deployed and managed **Kubernetes clusters within Confidential Virtual Machines** (CVMs), establishing a zero-trust environment for highly secure AI-sensitive data transfer and processing.

Gist Impact

Feb 2024 – Apr 2025

Software Development Engineer | Noida, India

- Managed and scaled infrastructure for SaaS and DaaS platforms powering AI-assisted sustainability analytics workflows, processing **~5 TB of data per month**.
- Re-engineered and optimised CI/CD pipelines using GitHub Actions, parallelising build stages, caching dependencies, and eliminating redundant test runs, **cutting deployment time from 30 minutes to 5 minutes (6x improvement)**.
- Automated ETL pipelines in Snowflake**, reducing data processing time by 80% and significantly improving the reliability and consistency of production data flows.
- Consolidated service logs into a centralised **Grafana Stack observability** framework, reducing error resolution time by 35% and increasing deployment velocity by 20%.

Aristocrat Gaming

Aug 2023 – Jan 2024

Game Developer | Gurugram, India

- Designed mathematical models and wrote simulation codes for slot games, calculating return to player percentages, hit frequencies, and other metrics as appropriate for markets across the Globe.
- Crafted a highly optimised simulation code for the Super Grand Star slot game, establishing a benchmark of excellence within the organisation. The optimised code significantly **reduced simulation runtime from 10 hours to 2.5 hours**.

PROJECTS

JoinUp - joinup.co.in

March 2025 – Present

Production-grade professional events marketplace | Node.js, Next.js, PostgreSQL, Docker, Redis, AWS, GCP

- Architected and scaled JoinUp (0→1)**, a production-grade professional events marketplace, owning end-to-end backend, infrastructure, and deployment across AWS and GCP.
- Built an SEO-optimised Next.js (App Router) frontend with SSR, dynamic metadata, and sitemap/robots configuration, **driving 3,000+ organic users/month**, improving website conversion by 8%.
- Designed a geo-spatial discovery system (Google Maps API + PostgreSQL) delivering low-latency, location-based recommendations to **500+ DAU at sub-500ms p99**.
- Deployed async processing pipelines using Redis and BullMQ with retries, exponential backoff, and dead-letter queues for reliable booking verification and notifications (AWS SES).
- Implemented Redis-based caching (**88% reduction in API response time**) and Grafana-driven observability, with production-grade infrastructure (Docker, Traefik, CI/CD) **sustaining 99.99% uptime at 100K+ requests/month**.

TECHNICAL SKILLS

Languages & Frameworks: JavaScript, TypeScript, Python, C++, Go, SQL, Bash, Node.js, Express.js, Prisma, FastAPI

Databases: PostgreSQL, MySQL, MongoDB, Redis, Snowflake

Systems & Architecture: Distributed Systems, Event-Driven Architecture, Microservices, AI Agents, LLM Integration

DevOps & Cloud: Docker, Kubernetes, CI/CD (GitHub Actions), Terraform, Nginx, Traefik, Cloudflare, Linux, Grafana, RabbitMQ, BullMQ, AWS (EC2, S3, RDS, SES, IAM, VPC), GCP, Azure