

AJOY SARKER

Backend Engineer | AI/LLM Systems | Fintech

+880 1740-114915 | ajoyr.official@gmail.com | linkedin.com/in/ajoyrju | github.com/ajoyr | ajoyr.netlify.app

SUMMARY

Backend engineer with 2+ years shipping fintech and AI-powered systems in Python, TypeScript, and NestJS. I work mostly on regulated financial platforms — KYC pipelines, maker-checker approvals, audit trails — and build the GenAI features on top of them: document extraction with Gemini Vision, agentic workflows with LangGraph. Comfortable owning a service end to end, from schema design through deployment and on-call.

SKILLS

Backend	Python, TypeScript, Node.js, NestJS, FastAPI, REST APIs, BullMQ
AI / LLM	Gemini Vision, OpenAI API, LangGraph, LangChain, RAG, pgvector, Typesense
Databases	PostgreSQL, MongoDB, Redis, MySQL, DynamoDB
Fintech	KYC/AML, maker-checker workflows, audit logging, fund accounting, ledger design
Security	RBAC, JWT, OAuth2, OTP, secrets management, encryption
Cloud / DevOps	AWS (Lambda, S3, EC2), Docker, GitHub Actions, Nginx
Observability	Grafana, Prometheus, Sentry, Datadog, Jest, Playwright
Frontend	React, Next.js, Tailwind CSS, TanStack Query

EXPERIENCE

Software Engineer – I

Brain Station 23 PLC

Mar 2024 – Present

Dhaka, Bangladesh

- Own production REST APIs (Python, NestJS) for fintech clients, holding 99.9% uptime across thousands of daily requests.
- Built maker-checker approval workflows, RBAC, and audit logging for regulated financial systems; atomic locking removed EOD race conditions.
- Shipped a GenAI KYC OCR pipeline (Gemini Vision) with multi-key failover and schema-constrained extraction for ID and tax documents.
- Built LangGraph agentic workflows with structured outputs and safety guardrails – won 1st place at the company's 2025 AI hackathon.
- Tuned PostgreSQL/MongoDB queries and added Redis caching, cutting p95 API latency by 40%.
- Integrated WhatsApp Business API, payment gateways, and OTP/email/SMS providers with resilient retry logic.
- Raised test coverage to 85%+ (Jest, Playwright), cut deployment time 50% with Docker CI/CD, and added Grafana/Sentry alerting – cutting production defects 30%.

PROJECTS

Shanta Asset Management – Mutual Fund Investor Platform

Python, NestJS, PostgreSQL, Gemini

- Led backend for a regulated mutual fund platform: investor lifecycle, unit movements, surrenders, CRM, accounting, and reporting.
- Built maker-checker workflows with atomic EOD locking and a Gemini Vision KYC OCR pipeline with multi-key failover and bank/branch enrichment.

BD Document Parser – Open Source

React, TypeScript, Gemini 2.5 Flash Lite [Live](#) | [GitHub](#)

- Open-sourced a 100% client-side parser that extracts structured data from Bangladeshi NID, BO, TIN, and bank documents via Gemini Vision – no backend, no hosting cost.
- Reuses the schema-constrained extraction approach from my production KYC pipeline in a fully serverless build.

Shanta EasyX – Financial Services Platform

NestJS, PostgreSQL, Redis [Live](#)

- Built transaction APIs, real-time WebSocket notifications, and a PDF report microservice for stock portfolios; 80%+ test coverage.

Intent-Based Hybrid Search – AI Hackathon Winner

NestJS, LangGraph, pgvector

- Combined vector and keyword search with LangGraph orchestration and safety guardrails – 1st place, Brain Station 23 AI Hackathon 2025.

Quiet Lawn – AI Workflow Automation SaaS

NestJS, TypeORM, PostgreSQL, AWS

- Built a multi-tenant SaaS backend with RBAC, vector-embedding job matching, and integrated auth, OTP, and media APIs.

WhatsApp Lead Automation

NestJS, AWS Lambda, Gemini, Deepgram [Demo](#)

- Built an event-driven WhatsApp webhook pipeline with multi-model OCR and real-time audio transcription via Deepgram.

Customisable Chat Widget

NestJS, MongoDB, pgvector, WebSocket [GitHub](#)

- Real-time chat backend with pgvector semantic search, JWT auth, and rate limiting; documented with Swagger/OpenAPI.

Longshot – Multi-Role Camera Platform

Next.js, NestJS, MongoDB [Live](#)

- Multi-tenant platform with dynamic RBAC, JWT refresh rotation, and a MongoDB aggregation-based admin panel.

ACHIEVEMENTS

- 1st Place, Brain Station 23 AI Engineering Hackathon 2025 (Intent-Based Hybrid Search); ranked 11th/90 teams overall.
- Ranked 29th/500+ teams, CodeSamurai National Hackathon 2022 (University of Dhaka).
- Solved 2,000+ problems across Codeforces, LeetCode, and AtCoder; 150+ rated contests.

EDUCATION

MSc in Computer Science and Engineering	May 2024 – Sept 2025
<i>Jahangirnagar University</i>	<i>CGPA: 3.75</i>
BSc in Computer Science and Engineering	Feb 2019 – Mar 2024
<i>Jahangirnagar University</i>	<i>CGPA: 3.68</i>