

Aditya Raj

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SUMMARY

- Second-year Computer Science Engineering student at Bennett University, an aspiring Software Engineer with strong foundations in **full-stack web development and distributed systems**, currently exploring **AI/ML, Generative AI, and Agentic AI systems**. Experienced in building scalable applications using **Java, Python, Spring Boot, React, and cloud platforms**. Passionate about developing intelligent systems that combine **web technologies with AI-driven automation, knowledge graphs, and RAG pipelines**.

EDUCATION

- **Bennett University** Greater Noida, Up, India
Bachelor of Technology - Computer Science And Engineering; CGPA: 8.12 2024 - 2028
- **R.P.S. Residential Public School** Patna, Bihar, India
Senior Secondary School(Class XII); Percentage: 92 2022 - 2023
- **St. Karen's High School** Patna, Bihar, India
Secondary School(Class X); Percentage: 93 2020 - 2021

SKILLS SUMMARY

- **Languages:** Python, Java, C, C++, JavaScript, SQL
- **Libraries:** LangChain4j, TensorFlow, Keras, NLTK, SpaCy, Pathway, ReportLab
- **Frameworks:** Spring Boot, FastAPI, React, Next.js, Node.js,
- **Tools:** Docker, Kubernetes, Git, PostgreSQL, MySQL, Neo4j, Supabase, firebase, Prisma
- **Platforms:** Linux, AWS, Microsoft Azure

PROJECTS

- **CogniSphere – AI-Driven Knowledge Graph & Conversational Intelligence Platform:**
Engineered a scalable full-stack workspace using **Java 21, Spring Boot 3.4, and React 18** that transforms unstructured data (PDFs, YouTube, Audio, URLs) into a visual **Neo4j knowledge graph** with interactive D3-force layouts. Integrated Generative AI via **Amazon Bedrock (Claude) and LangChain4j** to build a RAG-based chat assistant with a **Knowledge-Only mode** that eliminates hallucinations by grounding responses exclusively in the user's graph data. Architected a multi-modal ingestion pipeline using **AWS Textract, Transcribe, and Rekognition**, enabling OCR and transcription of complex media and supporting graph visualization of up to **200,000 nodes**.
- **LuminaTrade – Real-Time AI Financial Intelligence & Quant Terminal:**
Developed a high-performance financial terminal using **FastAPI and Next.js 14** that processes real-time OHLCV data for **2,300+ NSE/BSE symbols**, featuring a custom scheduler that refreshes the market database every **90 seconds**. Engineered a quantitative analytics engine using the **Pathway framework** implementing Monte Carlo simulations, **GARCH volatility forecasting**, and Ornstein-Uhlenbeck mean reversion for predictive analytics on Indian equities. Integrated **LLM-based RAG pipelines via Groq (Llama 3.3 70B)** to generate AI-driven stock commentary and automated 1-click intelligence reports consolidating **15+ technical indicators and F&O Greeks**.
- **LaunchPad – AI-Powered Compliance Copilot for Indian MSMEs:**
Engineered an **Agentic AI platform with 17 specialized agents** automating the end-to-end business registration and compliance lifecycle for Indian MSMEs across **10 regional languages**. Developed a **Document Intelligence pipeline** using Tesseract.js OCR and LLM classification supporting **15+ government document types** (Aadhaar, PAN, GST) with automated compliance mapping and risk detection. Architected a deterministic **JSON-based Rule Engine** eliminating AI hallucinations in legal guidance and integrated **Google Calendar/Tasks APIs** to convert compliance requirements into actionable timelines.
- **SynergySphere – Real-Time Team Collaboration Platform:**
Engineered a collaborative workspace using **React 18 and Node.js** with **Socket.IO** enabling real-time project updates, task synchronization, and team notifications across distributed users. Designed a type-safe backend using **Prisma ORM and PostgreSQL**, modeling relationships between Users, Projects, and Tasks while ensuring data integrity through automated migrations. Implemented enterprise-grade security using **JWT authentication, bcrypt password hashing, Helmet security headers, and CORS middleware**.

ACHIEVEMENTS

- **EY Techathon:** Selected for MVP Round among 4,667 teams from 183,247 registrations (Top 2.5%).
- **AWS AI for Bharat Hackathon:** Selected for MVP Round from 60,000+ registrations.
- **Hack for Green Bharat Hackathon:** Top 25 Finalist among 7,000+ teams; hosted at Microsoft Office (Top 0.36%).
- **HackJNU Hackathon:** Top 25 Team; organized by Jawaharlal Nehru University (JNU).