

Aritra Basak

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Software Engineer | Software Developer

Full Stack Software Engineer with over 2 years of experience building scalable, high-performance applications using Java, Spring Boot, and React.js. Proven ability to develop robust backend services, and integrate AI-driven solutions that drive measurable business outcomes. Passionate about solving complex technical challenges and continuously evolving through hands-on innovation.

Education

Narula Institute of Technology, B-Tech in Electronics and Communication Engineering

Aug 2019 – June 2023

- DGPA: 9.07/10

Experience

Consultant (previously Associate Consultant & Senior Analyst), EY – Kolkata, India

Feb 2023 –

- Engineered a multifunctional Insurance Claim Details Fetching Chatbot using Python, integrating LangGraph, Ollama, PGVector, and all-MiniLM-L6-v2 embeddings; orchestrated multiple specialized agents for arithmetical computation, analytical reasoning, query filtering, and vector-based semantic retrieval.
- Developed an AI-driven Grievance Portal using GenAI models for multilingual text extraction from grievance forms for the Chhattisgarh Government, reducing manual data processing time by 60% and accelerating response times by 2× for the Chhattisgarh Government.
- Developed an LLM-integrated Python automation system for the West Bengal Birth and Death Portal, enabling intelligent document classification and data extraction from uploaded birth and death certificates, increasing validation accuracy by 35% and reducing manual verification time by 80%.
- Was the lead engineer of the back end development of a new microservices-based application, using Spring Boot, gRPC, JWT Auth and more, for a West Bengal Government initiative.
- Lead the development of the Ayushman Bharat Digital Mission Connector v2.0, engaging directly with government clients to align technical delivery with requirements and overseeing full-stack development using React.js and Spring Boot.
- Worked directly with government clients from West Bengal, Telangana, and Rajasthan on software implementation projects, contributing to public sector digital transformation through hands-on R&D and solution delivery.
- Engineered a Python script for medical insurance fraud detection, significantly augmenting the system's ability to identify fraudulent claims by an impressive 70%.
- Developed a standalone Java service utilizing multithreading techniques for efficient Health records linking, increasing daily Health Record linking by over 100% for a West Bengal Government project.

Java Programmer Intern, Suven Consultants and Technologies Pvt. Ltd. – Kolkata, India

July 2022 – August 2022

- Strengthened Java programming skills through hands-on project work, developing Java projects based on core principles to reinforce learning.

Projects

AI-Agent.

GitHub URL

- Developed a personal AI Agent using Python and Generative AI, enabling real-time responses beyond standard LLM limitations. Features include email automation, local file search, and RAG-based document analysis.
- Tools Used: Python, Generative AI, RAG based Document Analysis, Function Calling.

Big Brain.	Project URL
<ul style="list-style-type: none"> Developed and deployed a functional application enabling users to upload, query, and perform vector searches on documents and notes while facilitating collaborative sharing through organizations. Tools Used: Next.js, Typescript, Clerk, Convex, Groq-Cloud Inference, Shadcn UI. 	
User Contact Service.	GitHub URL
<ul style="list-style-type: none"> Gained hands-on experience with microservice architecture, learned how to integrate Spring Cloud Netflix dependencies, and developed a foundational understanding of deploying Spring Boot services using Docker. I plan to further enhance the system by integrating new technologies to expand its capabilities Tools Used: Java, Spring Boot, REST API, Spring Cloud, Mongo DB, Postman, Docker. 	
Graph QL Integration.	GitHub URL
<ul style="list-style-type: none"> Optimized API performance by migrating from REST to GraphQL, achieving a 45% latency reduction and allowing users to dynamically select fields through parameterized queries for more efficient data retrieval. Tools Used: Java, Spring Boot, Graph QL, Postman API. 	
Modernizing Data Connection Mechanism.	GitHub URL
<ul style="list-style-type: none"> Enhanced connection efficiency and provided real-time performance insights using Grafana and Prometheus. Tools Used: Java, Spring Boot, HikariCP, MySQL, Grafana, Prometheus. 	

Technologies

Languages: Java, Python, JavaScript, SQL, GraphQL

Frameworks and Libraries: Spring Boot, Spring MVC, Spring Data, Spring Security, React.js, Tailwind CSS, Bootstrap, FastAPI, LangGraph

Technologies: REST API, gRPC, Prompt Engineering, RAG pipelines, Monolithic and Microservices Architecture, Apache APISIX, Grafana, Docker, Git, Postman, Microsoft SQL Server, MySQL, MongoDB

Honors and Awards

Client Extraordinaire	2024
Recognized as "Client Extraordinaire" for delivering exceptional results and fostering strong client relationships across multiple projects.	
Emerging Extraordinaire	2023
Received "Emerging Extraordinaire" award for outstanding performance during the first six months at EY	