Aritra Basak

Software Engineer | Full Stack Developer

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PROFILE

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.

PROFESSIONAL EXPERIENCE

Ernst & Young(EY)   02/2023 – present | Kolkata
Associate Consultant (promoted from Senior Analyst)

- Leading the full-stack development of a new microservices-based application as the primary developer, using Spring Boot, gRPC, and React.js for a West Bengal Government initiative.

- Developing an AI-powered phonetic matching engine to enhance name-matching accuracy, replacing legacy phonetic algorithms with modern, high-precision techniques.

- Lead the development of the ABDM 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.

- Working 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.

- Developed RESTful APIs in Spring Boot and built standalone services integrated with an AI Engine to power an Aadhaar Card scanning system, enabling automated data extraction from uploaded images. Cutting manual errors by 50% and speeding up processing by approximately 60%.

- 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.

- Engineered a Python script for medical insurance fraud detection, significantly augmenting the system's ability to identify fraudulent claims by an impressive 70%.

- Developed APIs in Python and integrated with Gen AI, leveraging localised data sources to create a chatbot that provides users with essential information autonomously.

Suven Consultants and Technologies Pvt. Ltd.   07/2022 – 08/2022 | Kolkata
Internship.
Strengthened Java programming skills through hands-on project work, developing Java projects based on core principles to reinforce learning.

ESL Technology   06/2021 – 07/2021 | Kolkata
Internship.
Developed a comprehensive understanding of Microsoft Azure Cloud and Power BI by executing a project that processed and analysed COVID-19 datasets, presenting results through dynamic Power BI visualisations.

SOFTWARE PROFICIENCY

Programming Languages:
Java, Python, JavaScript, TypeScript, SQL, HTML5, CSS3, GraphQL

Frameworks & Libraries:
Spring Boot, Spring MVC, Spring Data, Spring Security, React.js, Next.js, Tailwind CSS, Bootstrap

Databases:
 Microsoft SQL Server, MySQL, MongoDB

Tools & Technologies:
 REST API, gRPC, Gen AI, Monolithic, Microservices, Apache APISIX, RabbitMQ, Docker, Git, Postman, Linux

EDUCATION

Narula Institute of Technology   2019 – 2023 | Kolkata
B-Tech
Graduated in Electronics and Communication Engineering from Narula Institute of Technology with 9.07 DGPA.

PROJECTS

AI-Agent.
Technologies Used - Python, Generative AI, RAG based Document Analysis, Function Calling.
- **Objective**: To build intelligent and practical AI solutions by leveraging Python and Generative AI technologies to extend the capabilities of traditional language models.
- **Achievement**: 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.
- **AI-Agent Github Link** ⬈

Big Brain.
Technologies Used - Next Js, Typescript, Clerk, Convex, Groq-Cloud Inference, Shadecn UI.
- **Objective**: To develop a full-stack AI-based document search app with vector embeddings and multi-user sharing.
- **Achievement:** 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.
- **Big-Brain Project Link** ⬈

Graph QL Integration.
Technologies Used - Java, Spring Boot, Postman API.
- **Objective**: Improved data retrieval speed for client applications by replacing REST with GraphQL.
- **Achievement**: Reduced data-fetching latency by 45% and streamlined API response time.
- **SpringBoot-GraphQl Github Link** ⬈

User Contact Service.
Technologies Used - Java, Spring Boot, Spring Cloud, Mongo DB, Postman API, Docker.
- **Objective**: To showcases the use of Spring Boot, Spring Cloud (Netflix Eureka, Config Server), and MongoDB, with REST APIs enabling seamless service communication. This project is a scalable User-Contact Service built with a microservices architecture to efficiently manage user contacts.
- **Achievement**: 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.
- **User-Contact Github Link** ⬈

Modernizing Data Connection Mechanism.
Technologies Used - Java, Spring Boot, HikariCP, MySQL, Grafana, Prometheus.
- **Objective**: To demonstrate the efficiency of modern connection pool mechanisms and real-time monitoring.
- **Achievement**: Enhanced connection efficiency and provided real-time performance insights using Grafana and Prometheus.
- **Data-Connection-Project Github Link** ⬈

HONORS & 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.