

BISHWADIP MAITRA

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EDUCATION

MTech in CSE, Indian Institute of Technology (IIT), Tirupati, India Aug 2025 - Mar 2026 (Discontinued)

BTech in CSE, Indian Institute of Information Technology (IIIT), Sri City, India Dec 2021 – Jun 2025

Coursework: Data Structures & Algorithms, Webservice & Backend Development, RDBMS, OOP, Software Product Management, Distributed Systems

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL

Frameworks: Spring Boot, Spring MVC, Spring Data JPA, Spring Security, Hibernate ORM, React.js

Databases: MySQL, PostgreSQL, MongoDB, Redis

Tools: Git/GitHub, Apache Kafka, REST APIs, JWT, Maven, Postman, Swagger, IntelliJ IDEA

DevOps: CI/CD, Docker, Linux, Exploring AWS (EC2, Lambda, RDS) and ELK Stack

Concepts: Microservices, Design Patterns, SDLC, Agile/Scrum, SOLID Principles, Unit Testing (JUnit, Mockito)

EXPERIENCE

Software Product Manager(Lending APP) & Feature Developer (ERP) Intern Mar 2025 – May 2025

Samunnati, Chennai, India

- Accelerated feature delivery by 35% by developing custom NetSuite SuiteScript workflows and translating 30+ business requirements into Sprint-ready engineering tasks, achieving zero missed deadlines across 3 Agile sprint cycles
- Enhanced Unnati digital lending platform's user conversion rate by facilitating implementation of automated E-NACH flows, vernacular loan documents, and co-applicant integration while reducing onboarding failures by 28% through comprehensive testing and edge case documentation

Software Engineer Intern

May 2024 – Jul 2024

Edu-Explorer, Remote

- Reduced manual data processing time by 50% by building a React.js admin dashboard with reusable components, enabling the operations team to process 35% more student records daily.
- Increased development velocity by 30% by implementing Git-based collaborative workflows and leveraging AI-assisted coding (Claude Code), reducing code review cycles from 3 days to 1 day

SOFTWARE ENGINEERING PROJECTS

AI-Powered Fitness Coaching Platform — Java, Spring Boot, Kafka, MongoDB, Spring AI

[Link](#)

- Built an intelligent fitness tracking system enabling users to log daily workout activities and receive personalized AI coaching feedback by architecting 3 independent microservices with synchronous REST APIs for real-time user-activity communication and asynchronous Kafka event streaming for AI-driven analysis
- Achieved independent scalability by implementing Spring Cloud Config Server for centralized configuration management, API Gateway (Spring Cloud Gateway) for unified request routing and load balancing, Eureka Service Discovery for dynamic service registration and health monitoring
- Delivered context-aware training recommendations and injury prevention alerts by integrating OpenAI GPT-4 with custom prompt engineering, configuring the AI to assume a certified health coach persona that analyzes workout patterns, identifies form issues, and provides personalized feedback on training intensity, recovery periods, and performance trends

Hotel Booking System — Java, Spring Boot, MySQL, JWT, Redis

[Link](#)

- Improved user experience and system efficiency by reducing average API response time by 82% (from 200ms to 35ms) through implementing a Redis caching layer for frequently accessed hotel listings, room availability data, and pricing information, combined with optimized database indexing on search columns and cursor-based pagination for large result sets
- Enhanced data consistency and prevented race conditions by implementing pessimistic locking for concurrent booking operations, ensuring atomic inventory updates and eliminating double-booking scenarios while maintaining ACID transaction properties
- Eliminated critical security vulnerabilities by preventing CORS attacks through JWT-based token authentication with proper origin validation for cross-origin requests, blocking SQL injection attempts via comprehensive input sanitization.

ACHIEVEMENTS & PUBLICATIONS

Smart India Hackathon 2023 Finalist — Ministry of Education, Govt. of India

Dec 2023

Developed voice-enabled grievance app with NLP for automatic complaint categorization and routing to government ministries

IEEE INDICON 2025 Publications:

- [Transfer Learning for Ground-Level PM_{2.5} Estimation](#) - Algorithm improving prediction accuracy by 23%
- [Tropospheric O3 Prediction Framework](#) - ML - satellite data pipeline , 89% accuracy, impacting 6+ lakh residents