# Shubhodip Pal

#### Full Stack Developer

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# **Professional Summary**

A results-driven Software Development Engineer with full-stack expertise in Java, Spring Boot, React, and RESTful APIs. Proven ability to design, build, and deploy scalable web applications and backend systems with a strong focus on clean, maintainable code and performance optimization. Skilled in system architecture, and data structures and algorithms. An excellent communicator and collaborative team player, thriving in fast-paced, agile development environments, consistently focused on developer productivity and delivering real-world impact through robust, high-quality solutions.

### **Projects**

## ExamSpace – Online Assessment Platform

GitHub Live Site

- Built a secure, scalable online exam system with Java 21, Spring Boot, React, and MariaDB, deployed via Docker and Cloudflare pages.
- Implemented JWT authentication, anti-cheating (fullscreen, screen switch detection), and AI-powered question generation (Cohere API, Tesseract OCR).
- Designed and implemented modular REST APIs for user login, authentication, exam creation and participation, and analytics management; optimized backend performance by integrating Caffeine and browser caching.
- Automated CI/CD with GitHub Actions and Cloudflare Tunnel for secure deployment.

#### NutriSift - AI-Powered Recipe Management Platform

GitHub Live Site

- Developed an AI-driven recipe generation and management platform using Spring Boot, React, and MariaDB.
- Built Cohere-powered ingredient-based recipe generation, advanced filtering (diet, calories, cuisine), and a personalized 7-day meal planner.
- Engineered secure JWT authentication, cloud-synced grocery lists, and external API integrations (Pixabay for images, OpenStreetMap for restaurants).
- Designed modular REST APIs and robust database schema for user profiles, recipes, meal plans, and grocery management.

#### Technical Skills

Languages: Java, JavaScript, Python Frameworks: Spring Boot, React Databases: MariaDB, MySQL

Tools: Git, GitHub, VS Code, Docker, Maven, GitHub Actions

Concepts: RESTful APIs, OOP, JWT, CI/CD, Agile

#### Achievements

• IEEE Conference Publication – Published research titled "Optimized Convolutional Neural Network-Based Bengali Speech Emotion Classifier" in *IEEE INDICON 2024*. [DOI Link]

## Education

B.Tech in Computer Science and Technology

Aug 2022 - July 2026 (Pursuing)

Higher Secondary (WBCHSE)

Jun 2022

Secondary (WBBSE)

Mar 2020

University of Engineering & Management, Kolkata YGPA: 8.17 (Till 6th Sem)

Baranagore Ramakrishna Mission, Kolkata

Percentage: 78.8%

Baranagore Ramakrishna Mission, Kolkata Percentage: 86%

#### Certifications

- Alpha (DSA with Java) Apna College
- Delta (Full Stack Web Development) Apna College
- Data Structures & Backend with Java Board Infinity (Coursera)
- AWS Fundamentals Amazon Web Services (Coursera)