

# PRAGYAN BORTHAKUR

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## Technical Skills

**Backend & APIs:** Node.js, TypeScript, Express, RESTful APIs, GraphQL, WebSocket, Microservices Architecture

**Languages:** JavaScript, TypeScript, Java, Scala, C#, C

**Databases:** PostgreSQL, MongoDB, Redis, DynamoDB, OracleDB, SQL

**Event-Driven Systems:** Event-driven architecture, Message queues, Pub/Sub patterns

**DevOps & Cloud:** Docker, Kubernetes, Git/GitHub Actions, AWS (EC2, S3, Lambda), Bash

**Frameworks:** Spring Boot, NodeJS, .NET Core

**Tools:** Jest, Postman, Swagger, JPA/Hibernate, Spring Security, JWT, Firebase

## Experience

### Software Engineering Intern

Jul 2025 – Sep 2025


ADP (*Automatic Data Processing*)

Hyderabad, India

- Spearheaded **scalable migration logic** for **AWS DynamoDB** transition serving **1M+ clients**, designing optimized partition key strategies that **optimized fault tolerance by 30%** and ensured **zero downtime**
- Revamped **WOTC tax credit processor workflows** using **C#/.NET Core**, implementing data validation pipelines and audit logging that **reduced validation errors by 25%** and **systematized traceability by 40%**
- Fortified **secure encryption/decryption workflows** implementing **AES-256 standards** and **RBAC policies**, achieving **100% GDPR and SOC 2 Type II compliance** across enterprise systems


## Projects

### Knowledge Ingestion Pipeline | *Scala 3, Google Gemini AI, GitHub Actions, Discord*

[View Project](#) 

- Architected a **serverless automated pipeline** in **Scala 3** to ingest and summarize research papers, utilizing **functional programming** patterns and **Futures** for asynchronous non-blocking I/O operations
- Integrated **Google Gemini 2.5 Flash** to process raw abstracts into “Engineering Takeaways,” optimizing **prompt engineering** for high-signal summaries and implementing a robust **Fetch-Analyze-Deliver** workflow
- Engineered **lightweight networking** layer using native **Java HTTP Client**, ensuring faster cold starts and lower resource consumption for the **ETL process** on shared runners
- Deployed a **zero-cost CI/CD workflow** using **GitHub Actions** with **Cron scheduling** to execute daily, pushing structured insights via **Discord Webhooks** for real-time consumption

### Multi-Tenant SaaS Payroll System | *Spring Boot, React, PostgreSQL, Docker*

[View Project](#) 

- Orchestrated and developed scalable microservices-based SaaS platform with **RESTful API backend** using **Spring Boot**, implementing schema-based tenant isolation in **PostgreSQL** for secure multi-tenant data segregation supporting **3 user hierarchies** with **RBAC**
- Formulated streamlined payroll calculation engine processing attendance, overtime, and allowances with **sub-second response times**, generating **PDF payslips** and maintaining **ACID compliance** across 15+ normalized relational tables
- Implemented **event-driven** attendance system with real-time check-in/check-out workflows, utilizing **Java Time API** for precise working hour calculations and automated penalty computations with **millisecond precision**
- Designed **secure** financial transaction modules with payment gateway integration and loan management system featuring **automated** EMI deduction scheduler, implementing **JWT authentication** and **audit trails** for compliance
- Accelerated database performance using **JPA/Hibernate ORM** with N+1 query resolution, implemented **Redis caching layer** for session management, and achieved **45% reduction in initial load time** through code-splitting
- Standardized application using **Docker** for consistent deployment environments, implemented **API versioning** and comprehensive error handling, preparing for **Kubernetes orchestration** and horizontal scaling

## Education

### The Assam Kaziranga University

Oct 2021 – Jul 2025

*Bachelor of Technology in Computer Science Engineering*

Assam, India

- CGPA:** 8.98/10
- Coursework:** Data Structures & Algorithms, DBMS, OS, Computer Networks, Software Engineering