Dheeraj Singh

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LinkedIn | GitHub | LeetCode

Professional Summary

Software Engineer with 1+ years of experience building payment microservices and backend systems at Visa. Experienced in Java, Spring Boot WebFlux, Vert.x, TypeScript, Node.js, Kafka, and distributed systems, with additional hands-on work in multi-agent AI workflows and full-stack development.

Experience

Visa Inc. June 2025 – Present
Software Engineer *Bengaluru, Karnataka*

- Designed and developed a Standing Instruction microservice for RuPay recurring payments as part of the migration from legacy CyberSource to Payments 2.0, using Java and Spring Boot WebFlux to coordinate 7+ downstream microservices through reactive orchestration.
- Built a component-testing framework for Vert.x orchestrators, with a fluent DSL for in-process workflow validation and Maven-based CI/CD integration.
- Developed AgentSwarm, a multi-agent engineering workflow using TypeScript, Node.js, and Claude AI to automate cross-repository parity analysis and resolution.

Congruent Solutions May 2024 – August 2024
Software Development Intern *Chennai, Tamil Nadu*

- Designed and implemented a Server-Driven UI (SDUI) architecture to support dynamic UI configuration and reduce dependencies on frontend deployments.
- Built a reusable client SDK with a renderer, component library, and service layer for dynamic UI rendering.

4Climate iCreate May 2023 – July 2023
Software Development Intern *Ahmedabad, Gujarat*

- Developed backend services for IoT-based systems using AWS IoT to support real-time device data processing.
- Designed and implemented REST APIs for device communication and data handling.

Projects

SecondMint.in | *React, Node.js, Express.js, MongoDB* Personal Project

- Developed a verification-led pre-owned goods marketplace with seller-submitted product details and images, admin listing review, and a doorstep/open-box verification workflow to distinguish it from open-listing marketplaces.
- Built MERN-based features for authentication, product listings, search, dynamic filtering, and transactions, with escrow-based payment flow to support safer buyer–seller exchanges.

Smart Routing ML System | *Python, Scikit-learn, XGBoost, Pandas* Visa Inc. Project

- Built a multiclass routing model using a dataset of 100K+ records, applying exploratory data analysis, feature engineering, and label normalization to prepare transaction data.
- Benchmarked six algorithms and used GridSearchCV for hyperparameter tuning, achieving 94% model accuracy.

Technical Skills

Languages: Java, JavaScript, TypeScript, Python, C/C++, SQL, HTML/CSS
Frameworks & Libraries: Spring Boot, Spring WebFlux, Vert.x, Node.js, Express.js, React, Next.js, FastAPI, Flask
Databases: MongoDB, MySQL, Oracle, Cassandra
Messaging: Kafka
Cloud & DevOps: AWS, Docker, Kubernetes, Jenkins, Helm, CI/CD, Git
Tools: Maven, Consul, Vault, Prometheus, VS Code, IntelliJ IDEA, PyCharm
ML Libraries: Scikit-learn, Pandas, NumPy, Matplotlib
Core Concepts: Data Structures & Algorithms, System Design, Microservices, Distributed Systems, DBMS, OOP, Reactive Programming

Education

IIITDM Kancheepuram July 2021 – July 2025
Bachelor of Technology in Electronics and Communication Engineering *Chennai, Tamil Nadu*

Open Source Contributions

OWASP Threat Dragon: Contributed UI and functionality improvements through merged pull requests.
Apache Projects: Contributed to Apache DevLake (Incubating) and Apache Infrastructure websites.

Honors and Awards

Leadership: Served as Head of the CS Club at IIITDM Kancheepuram, organizing technical events.
Hackathons: Winner, Vashisht Hackathon 2023 by IIITDM Kancheepuram; Finalist, HackFrenzy Hackathon 2023 by IIIT Sricity.