

PRAYAG SRIDHAR

Boston, MA (Open to Relocation)

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PROFESSIONAL SUMMARY

Software Engineer experienced in building secure, scalable full-stack and backend applications using Java, Spring Boot, React.js, Node.js, Python, PySpark, PostgreSQL, AWS, Docker, and Kubernetes. Skilled in REST API development, authentication, data pipelines, analytics dashboards, and performance optimization. Reduced dashboard response times by 65%, improved expense categorization accuracy to nearly 90%, built data pipelines processing around 5 million daily events at 99.9% uptime, and cut ETL batch processing time by 35% across finance, government, and transportation domains.

EXPERIENCE

Capital One

Jan 2026 - Present

Software Engineer

Boston, MA

- Built secure full-stack finance modules to support user authentication, profile management, account access, and personalized financial dashboards using JWT and Spring Security.
- Designed analytics dashboards using React.js, JavaScript, Chart.js/Recharts, HTML, and CSS to visualize net worth, spending, budgets, portfolios, goals, and AI insights which helped **reduce manual financial tracking by 60%**.
- Implemented transaction processing logic using SQL and PostgreSQL to clean raw banking data, remove duplicates, normalize merchant names, classify debit/credit transactions, and **improve expense categorization accuracy to nearly 90%**.
- Optimized application performance through SQL indexing, pagination, caching, lazy loading, reusable components, input validation, and exception handling, **reducing dashboard response time from approximately 6 seconds to under 2 seconds**.
- Collaborated with product managers, business analysts, finance SMEs to gather requirements, define user stories, validate financial calculations, and align platform features with business goals.
- Developed account aggregation workflows using Spring Boot, Plaid Sandbox API and REST APIs to sync bank accounts, retrieve balances and transactions, and map external financial data to internal user profiles.

Softeq

Sep 2025 - Dec 2025

Software Engineer Intern

Boston, MA

- Developed real-time traffic alerting using WebSockets, databases and caching for congestion and emergency route monitoring which **reduced duplicate alerts by 60%** and helped operators **respond 30% faster through prioritization**.
- Supported REST API development using Node.js, Express.js, and Python to clean and integrate traffic, GPS, weather, incident and IoT sensor data for transportation analytics.
- Assisted with JWT authentication and role-based access control implementation to strengthen application security across user roles.

Tata Consultancy Services

Jul 2022 - Jul 2024

Software Development Engineer

Bengaluru, India

- Built scalable batch and data-processing systems using PySpark, Apache Spark, FastAPI, PostgreSQL, Redis, Docker, Kubernetes, and AWS that **processed 5 million daily events** across multiple government departments while improving state tracking, fault tolerance, and real-time operational visibility.
- Optimized large-scale ETL workloads through broadcast joins, partition pruning, adaptive query execution, and shuffle tuning, **improving batch processing performance by 35%**.
- Developed secure RESTful APIs for status tracking, SLA monitoring, reporting, and workflow visibility, integrating PostgreSQL and Redis caching to achieve **less than 50ms response times**.
- Deployed and maintained containerized services on AWS using Docker, Kubernetes, CI/CD, Prometheus, and Grafana, contributing to 99.9% availability for mission-critical citizen-facing applications.
- Architected centralized data storage on Delta Lake with ACID guarantees, optimized partitioning, and structured data models to support dashboards, audit reporting, and cross-department analytics.

TECHNICAL SKILLS

Programming Languages: C/C++, Java, Python, JavaScript, SQL

Backend Development: Spring Boot, Node.js, Express.js, FastAPI, REST APIs, Prisma ORM, BullMQ, Microservices, WebSockets

Frontend Development: React.js, Next.js, TypeScript, tRPC, Tailwind CSS, HTML, CSS, Chart.js, Recharts, Responsive UI

Data: Apache Spark, PySpark, PostgreSQL, MongoDB, Redis, Delta Lake, ETL Pipelines, Data Modeling

Cloud and DevOps: AWS (EC2, Lambda, S3, SQS), Docker, Kubernetes, CI/CD, Terraform, Prometheus, Grafana, Git

Security: JWT Authentication, Spring Security, Role-Based Access Control, Input Validation, OAuth, NextAuth.js

Tools and Integrations: Plaid API, Playwright, k6, Vitest, GPS APIs, Weather APIs, IoT Sensor Data

PROJECTS

Real-Time Notification Engine | [Github](#)

Sep 2025 - Dec 2025

- Built a full-stack notification platform using Next.js 14, TypeScript, tRPC, Prisma, PostgreSQL, and Redis that sustained **10,500 events/min** at **100% delivery rate** with real-time updates via Socket.io and background processing via BullMQ.

Real-Time Network Traffic Monitor | [Github](#)

May 2025 - Aug 2025

- Developed a network monitoring dashboard using Python, FastAPI, React, and D3.js that captured **2,140 packets/second** with **92% test coverage** across **58 pytest tests**, deployed on AWS EC2 via Terraform.

EDUCATION

Northeastern University, Boston, MA

Master of Science in Computer Engineering

May 2026

GPA: 3.75/4.00

BMS College of Engineering, Bangalore, India

Bachelor of Engineering in Electrical and Electronics

Jul 2022