

Prudhvi Nelavelli

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Summary

Software Engineer with 5+ years of experience building scalable backend services, distributed systems, and production ready full Stack web applications. Skilled in Java, Spring Boot, Angular, React, .NET Core, AWS, and SQL databases. Experienced in designing microservices, API contracts, event driven architectures, and high performance systems. Solved **600+ DSA problems** (LeetCode rating **1700+**), and earned **Hacker-Rank 5 star Problem Solving badges**. Works effectively in startups and mid to large engineering teams with strong ownership, clean code, and end-to-end delivery.

Core Skills

Languages: Java, TypeScript, JavaScript, Python, C#, SQL, PL/SQL, C, C++

Backend: Spring Boot, Spring MVC, Spring Cloud, JPA/Hibernate, ASP.NET Core Web API, REST, GraphQL (basic)

Frontend: Angular, React, RxJS, HTML5, SCSS, Bootstrap, Material UI

Cloud & DevOps: AWS (ECS/EKS, EC2, S3, RDS, Lambda, API Gateway, SQS/SNS), Docker, Kubernetes, Jenkins, GitHub Actions, Azure DevOps

Databases: PostgreSQL, MySQL, SQL Server, Oracle, MongoDB, Redis

Architecture: Microservices, distributed systems, event driven design, caching, load balancing, sharding, circuit breakers

Messaging: Kafka, RabbitMQ, SQS/SNS

Testing: JUnit, Mockito, REST Assured, Postman, xUnit/MSTest, SonarQube

Observability: ELK/EFK, CloudWatch, Prometheus, Grafana, OAuth2, JWT, RBAC

Experience

Software Development Engineer Fiserv (Contract) Jun 2025 – Present Columbus, OH

- Developed and maintained Spring Boot microservices powering billing, document processing, and financial reporting used by large enterprise banking clients.
- Implemented end to end event workflows using Kafka, SQS, and SNS to support asynchronous request handling, reducing API load and improving system resilience.
- Designed idempotent API patterns, request tracing, retry logic, and error handling flows that significantly improved stability in high load production traffic.
- Tuned SQL queries, optimized entity mappings, added indexes, and introduced batch operations reducing critical DB bottlenecks by 30 to 40%.
- Collaborated on converting legacy synchronous flows into distributed services, improving scalability and enabling horizontal autoscaling on AWS ECS/EKS.
- Introduced Redis caching strategies for static and intermediate data, reducing repeated DB calls and boosting throughput.

- Built CI/CD pipelines with Jenkins/GitHub Actions supporting automated testing, image building, and multi environment deployments.
- Enhanced observability with structured CloudWatch logs, dashboards, alarms, and distributed tracing using correlation IDs.
- Partnered with product, architecture, and QA teams to refine feature requirements, API contracts, and release plans.

Software Engineer Intern ComplexCare Solutions May 2024 – Aug 2024 Bowie, MD

- Developed Complexcare Data Injection System features using Angular and ASP.NET Core Web APIs, supporting Data workflows and internal operations.
- Built reusable shared UI components including nested tables, advanced filtering, pagination, and form modules to accelerate development across multiple pages.
- Designed REST API endpoints with clean architecture principles, validation layers, DTOs, repositories, and service abstractions for maintainability.
- Implemented SQL Server queries, stored procedures, and views to optimize healthcare data ingestion and reporting.
- Added robust server side validations, audit logs, and exception handling for HIPAA compliant data pipelines.
- Improved application reliability by configuring Azure AppInsights dashboards, structured logs, and performance metrics.
- Collaborated in Agile sprints, working with QA, UI/UX, and backend teams to deliver shippable increments.

Software Developer / Graduate Assistant Southeast Missouri State University Aug 2024 – May 2025

- Developed full Stack university applications using Angular frontends and Spring Boot REST APIs.
- Created reusable UI component libraries (dynamic tables, multi-select dropdowns, list views, forms), reducing page development time across the team.
- Designed and implemented data models, repository layers, service classes, validation logic, DTO mappers, and exception handlers.
- Integrated secure authentication and authorization flows using OAuth2, JWT, and role-based routing on the frontend.
- Collaborated with university departments to gather requirements, design workflows, and deliver functional internal tools.
- Improved API response times by query optimization, pagination strategies, and implementing caching where needed.
- Mentored students in algorithms, debugging, Git workflows, and clean coding practices.

Software Developer GRT Global Logistics Mar 2022 – Jun 2024 Logistics & Supply Chain

- Designed and built logistics modules including container booking, inventory management, workflow scheduling, and shipment tracking using Java, Spring Boot, Angular, and PostgreSQL.
- Participated in microservices architecture design defining service boundaries, data ownership, caching layers, API specifications, and async event flows.
- Implemented Redis based caching and reduced high frequency DB queries, boosting API performance by 85%.
- Built Kafka based message pipelines for shipment updates, partner integrations, and background processing tasks.
- Optimized PostgreSQL tables using partitioning, indexing, and query rewrites to improve performance for large datasets.
- Delivered complex Angular interfaces with nested tables, real time updates, reactive forms, and validation logic.
- Reduced UI rendering times by 60% by implementing lazy loaded modules, smart caching, and optimized API call grouping.
- Conducted root cause analysis for production issues and implemented long-term fixes to improve system reliability.
- Worked closely with QA, PMs, and other backend teams to ship stable, scalable features in agile sprints.

Graduate Engineer (Software) Vinculum Solutions Pvt. Ltd. Jan 2021 – Mar 2022

- Developed backend modules for loyalty engines, e-commerce systems, and multi-tenant platforms using Java, Spring Boot, and Hibernate.
- Built APIs for loyalty points, redemption workflows, promotional campaigns, and customer onboarding flows.
- Integrated payment gateways, notifications, and partner APIs with robust retry, throttling, and rollback mechanisms.
- Improved response times by optimizing DB queries, caching repeated lookups, and reducing unnecessary joins.
- Built automated Jenkins CI/CD pipelines for deployment, testing, and packaging.
- Assisted in production support, troubleshooting issues, analyzing logs, and implementing fixes.

Education

M.S., Applied Computer Science Southeast Missouri State University (Aug 2023–May 2025)

B.Tech, Computer Science & Engineering Lovely Professional University (Aug 2017–May 2021)

Competitive Programming

- Solved **600+** problems across LeetCode, HackerRank, GfG, CodeSignal.
- **LeetCode Peak Rating: 1700+.**
- **HackerRank 5-Star Problem Solving:** Basic & Intermediate.

Projects

Online Code Execution Platform

- Built a multi-tenant coding environment with Angular + Spring Boot enabling browser-based execution of Java/Python code.
- Integrated AWS S3, Lambda, and RDS for scalable storage and execution.