Harshwardhan Patil

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Overview

Full-Stack Engineer with 3+ years' experience designing and delivering **scalable, high-performance systems** across frontend, backend, and cloud. Skilled in modular architectures and CI/CD on AWS. Proven record of stable production releases, and building systems aligned with clean architecture and robust system design principles.

Education

University of Texas at Arlington   *Master's in Software Engineering*   *Expected May 2026*

Technical Skills

- **Languages & Frameworks::** Java, TypeScript, JavaScript, SQL, Spring Boot, Angular, Node.js
- **Cloud & DevOps:** AWS (EC2, ECS, S3, RDS, Secret Manager), Docker, Jenkins, GitHub Actions, Nginx, CI/CD
- **Databases:** PostgreSQL, Redis, MySQL, MongoDB, Database indexing, Query optimization
- **Testing & Security:** JUnit, Jasmine, SonarQube, Postman, JWT, RBAC, HTTPS/TLS, CORS, CSRF/XSS protection
- **Design & Architecture:** System Design, Low-Level Design, Design Patterns, SOLID principles, database schema design

Professional Experience

Software Engineer, Clarivate Analytics – Bangalore, India   *Aug 2023 – Aug 2024*

- Developed dynamic PPT and PDF export pipelines, generating customized reports from charts and tables with custom filters, layouts, and metadata.
- Proactively identified performance bottlenecks in reporting workflows and implemented optimizations across API, database, and caching layers.
- Design and evolution of scalable Spring Boot REST APIs with explicit versioning, DTO-based contracts, and standardized error handling for long-term platform growth.
- Implementation of role-based access control across backend and frontend layers, enforcing subscription-tier and region-based data visibility rules.
- Designed and implemented low-latency typeahead and autocomplete workflows, improving search responsiveness over large-scale drug datasets.
- Architected a highly configurable, reusable Angular table framework supporting filtering, pagination, exports, and user preference persistence, later adopted across multiple internal teams.
- Containerized microservices and build deployment pipelines using Docker, Jenkins, and Spinnaker, supporting production releases with zero rollback.
- Built reusable, aggregation-driven Angular chart components using D3.js, enabling interactive analytics and advanced reporting workflows.

Associate Software Engineer, Clarivate Analytics – Bangalore, India   *Aug 2021 – Jul 2023*

- Supported continuous production release cycles over two years by deploying containerized services using Jenkins and Spinnaker, ensuring release stability and operational reliability.
- Improved frontend performance by minimizing unnecessary re-renders and optimizing data-fetching patterns, resulting in 20% faster page loads.
- Migrated a legacy client-side component to a modern Angular 13 application, contributing to C4-level architectural designs and business components.
- Implemented and optimized PostgreSQL schemas, queries, and indexing strategies to improve performance for data-intensive analytical workloads.
- Integrated Elasticsearch-backed search capabilities to support fast, advanced queries across large life sciences and drug datasets.
- Developed reusable Angular UI components including charts and advanced table views, integrated with Spring Boot APIs for search and reporting.
- Implemented secure request-handling mechanisms including JWT-based authentication, CORS/CSRF protection, and input validation standards.

Projects

Employee Management System   *Dec 2024 – Nov 2025*
Unified platform for managing teams, projects, and access at scale. It integrates multiple tech stacks while ensuring robust security and compliance.
Tools: Spring Boot, Angular, PostgreSQL, AWS (EC2, RDS, S3, Secrets Manager), Docker, GitHub Actions, Jenkins

- Built to solve the challenge of managing teams and projects at scale, this system applies robust system design to unify multiple tech stacks, maintain RBAC, and automate deployments on AWS.
- Engineered RESTful APIs supporting multi-entity management (employees, departments, projects, tasks) with pagination, filtering, and search.
- Integrates real-time dashboards and secure role-based access, making onboarding and daily operations seamless for distributed teams.

Battle Arena – Real-Time Multiplayer Platform   *May 2024 – Present*
Competitive multiplayer artillery game with modular engine, real-time sync, and physics-based gameplay. Built for low-latency, scalable tournaments.
Tools: Angular, Phaser 3, Spring Boot, Node.js, MongoDB, WebSockets, Docker, AWS (EC2, RDS, S3, Secrets Manager)

- Created to bring competitive gaming and physics-based fun to the browser, this platform solves multiplayer orchestration and real-time sync using custom backend and WebSocket logic.
- Implemented terrain-aware movement and modular game engine, making it easy to add new features and to scale for future tournaments.
- Designed modular backend services for authentication, matchmaking, and gameplay orchestration, ensuring extensibility and maintainability.

AI-Powered Personal Finance Manager   *Feb 2025 – April 2025*
A personal finance manager that empowers users to track expenses, set budgets, and receive AI-driven recommendations for financial health.
Tools: Flask, Streamlit, Redis, Plaid API, Docker, AWS

- Built to help users take control of their finances, this platform connects to live banking data and delivers actionable insights for smarter budgeting and expense tracking.
- Automated analytics and dashboards make financial planning intuitive, while secure cloud deployment ensures privacy and reliability.
- Developed backend APIs for transaction ingestion, categorization, and analytics, leveraging Flask, Redis, and Plaid API for robust data processing.