Harshwardhan Patil

 Arlington, TX   work.harshwardhanpatil@gmail.com   817-938-9288   LinkedIn   GitHub   Portfolio

Overview

Frontend-focused Full-Stack Developer with 3+ years' experience delivering high-impact, reusable Angular solutions, optimizing performance and accessibility, and driving zero-defect production releases. Proven track record mentoring junior engineers, building CI/CD pipelines, and contributing to scalable system architecture.

Education

University of Texas at Arlington   *Expected May 2026*
Master's in Software Engineering
- **Relevant Coursework:** System Design, Software Testing, Cloud Computing, AI/ML with Python, Distributed Systems

Technical Skills

Programming Languages: TypeScript, JavaScript, Java, Python, SQL, Bash

Frontend Development: Angular (CLI, Material, RxJS), HTML5, CSS3, Responsive Design, Lazy Loading, Routing Guards, Component Reusability, Accessibility (ARIA, Lighthouse), D3.js

Backend Development: Spring Boot, Spring Security, Spring Data JPA, Node.js, Flask, RESTful API Design, DTO Pattern, JWT Authentication, Clean Architecture, Microservices

Full Stack & Architecture: System Design, SOLID Principles, Domain-Driven Design (DDD), Modular Monoliths, Event-Driven Architecture (EDA), High-/Low-Level Design (HLD/LLD), UML (Class, Sequence, Activity Diagrams), MVC, Code Quality

DevOps & Deployment: Docker, Docker Compose, Jenkins, GitHub Actions, GitLab CI/CD, Spinnaker, Nginx, Apache HTTP Server, Terraform

Cloud Platforms: AWS (EC2, ECS, RDS, S3, Lambda, Aurora), Kubernetes (basic), Cloud Networking, Environment Variables, IAM Policies

Databases & Tools: PostgreSQL, MySQL, MongoDB, Amazon DynamoDB, Redis, pgAdmin, DBeaver, MongoDB Compass

Testing & Quality: Jasmine, JUnit, PyTest, SonarQube (Self-hosted & Cloud), E2E Testing (Protractor), Postman Tests, Chrome Dev Tools

Security & Auth: Spring Security, OAuth 2.0 (basic), JWT, CORS, HTTPS, CSRF Protection, Role-Based Access Control (RBAC)

Developer Tools: Git, VS Code, IntelliJ IDEA, Jira, Notion, Figma, Draw.io, Mermaid

Productivity & CLI Tools: Tmux, Vim, Zsh, CLI Debugging, Homebrew

Agile & Collaboration: Agile, Scrum, Sprint Planning, Technical Presentations, Mentoring, DevOps Advocacy, Documentation, Continuous Learning

Professional Experience

Software Engineer, Clarivate Analytics – Bangalore, India   *Aug 2023 – Aug 2024*
Full-Time
- Designed and developed a fully reusable, configurable table component in **Angular**, enabling dynamic column ordering, user preference storage, and real-time updates. Integrated chips, links, buttons, and side panels for rich interactions, plus seamless Excel export using **Apache POI**, reducing table code duplication by **80%+**.
- Built a sophisticated dynamic filter system with a two-pane popup UI, delivering real-time interdependent filtering logic where selected options narrow down others automatically. Added a robust reset-to-last-applied-state feature, intuitive chips for active filters, and a 'Clear All' function, enhancing data exploration usability.
- Architected generic, reusable **D3.js** components for bar, stacked bar, line, and pie charts with abstracted chart data preparation and configuration methods. Enabled flexible injection of chart options for legends, tooltips, labels, and colors, driving consistent, maintainable visualizations across modules.
- Developed robust **PPT/PDF export functionality** using **RxJS forkJoin**, resolving large report download performance issues and improving content clarity for business users.

- Refactored legacy modules to follow modern **Angular best practices**, transforming them into reusable, modular components that improved maintainability, scalability, and future feature development.

- Maintained full ownership of **56+ production releases** over **28 months**, executing error-free deployments for high-stakes systems using **wiki** for release tracking and reports (*release.xl*), while automating infrastructure provisioning and pipelines with **Spinnaker**, **Terraform**, and **Jenkins** to rapidly roll out Dockerized applications from **Bitbucket** across **AWS environments**.

- Achieved and maintained **90%+ unit test coverage** across UI modules using **Jasmine** and **SonarQube**, ensuring clean, secure code and reliable feature rollouts with minimal post-release defects.

- Mentored **2 junior Angular developers** through weekly pairing sessions, architecture reviews, and knowledge transfer, enabling them to deliver at **100% sprint capacity** (up from 50%) and cutting their training phase in half — saving over **2 months** of onboarding time for the team.

- Engineered complex **tree filters** and **search result bookmarking** in **Angular 17**, **Spring Boot**, and **PostgreSQL**, enabling users to save and revisit custom search results seamlessly — driving collaborative success across frontend and backend layers and improving user efficiency.

- Implemented high-resolution **qualitative data rendering** with **pie chart visualizations**, boosting analytical clarity during **User UAT** and cutting manual feedback cycles by **30%**.

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

- Designed and implemented reusable **spike charts** and **advanced search functionality** using **Angular** and **D3.js**, improving data usability and reducing development effort.

- Bootstrapped a full-stack **Node.js** backend and **Angular** frontend monorepo, setting up **Bitbucket** branching rules and CI/CD pipelines for builds, testing, and deployments.

- Containerized **Angular**, **Node.js**, and **Spring Boot** services with **Docker Compose** for local dev and **AWS EC2/ECS** deployment.

- Defined **repository governance** standards in **Bitbucket** with protected branches, PR approvals, and code quality gates, ensuring consistent, high-quality releases.

- Developed user-focused features including advanced **tree filters**, **bookmarkable tables**, and **saved search functionality**, collaborating with cross-functional teams to deliver dynamic filtering logic that adapts to evolving user requirements and enhances end-user experience across modules.

- Standardized and documented **reusable chart and filter modules**, contributing to an internal **design system** adopted across **5+ modules** and reducing onboarding time by **50%**.

- Owned and executed **15+ production releases** with zero rollbacks, ensuring high availability and reliability for critical product modules early in my career.

- Implemented **lazy-loaded modules** and optimized state management patterns in **Angular** to reduce initial bundle size and improve page load times by **30%**.

- Improved application **accessibility** by adding ARIA roles, semantic HTML, and keyboard navigation support, raising Lighthouse a11y scores to **95+**.

- Wrote and maintained **Jasmine unit tests** for frontend modules, achieving **90%+ test coverage** and ensuring high code quality with minimal post-release defects.

- Built robust **end-to-end (E2E)** and integration tests using **Protractor** and **Jasmine**, extending coverage beyond unit tests to catch regressions early and reduce production bugs by **25%**.

- Enforced **frontend security** best practices, including secure authentication flows with **JWT**, CORS configuration, CSRF protection, and input sanitization to prevent XSS vulnerabilities.

Projects

Battle Arena – Multiplayer Artillery Game Platform   *May 2024 - Present*
GitHub · Angular, Phaser 3, Spring Boot, Node.js, MongoDB, WebSockets, Docker, AWS

- Architected and implemented a full-stack real-time multiplayer game platform inspired by Pocket Tanks, supporting modular player types (tanks, wizards, mechs) and pluggable arena systems.

- Designed a scalable microservices architecture, separating concerns across services: auth-service, user-profile-service, leaderboard-service, matchmaking-service, game-engine-service.

- Integrated Phaser 3 game engine within Angular 17 for smooth turn-based 2D artillery gameplay inside a browser.

- Developed backend with Spring Boot REST APIs for user management and leaderboards, and Node.js + Socket.io services

for real-time matchmaking and gameplay physics.

- Used MongoDB for flexible storage of user profiles, match histories, and ranking data, enabling easy schema evolution.
- Containerized all services with Docker, orchestrated via docker-compose, enabling one-command local development and future CI/CD scalability.
- Implemented JWT-based authentication, modular Angular routing, and dynamic UI features like dashboards, player stats, and leaderboards.

Better Finance – Hackathon Project (UTA)   *Hackathon - Mar 2025*
GitHub · Angular, Flask, Streamlit, PostgreSQL, Plaid API, Docker

- Developed in a team of 3 during a university hackathon; built a full-stack platform for AI-powered personal finance management.
- Integrated Plaid API for secure bank account linking and real-time transaction syncing.
- Implemented OCR-based invoice processing and financial advice chatbot using AI/ML models.
- Designed Streamlit UI for quick access to account overviews, transaction analytics, and budget alerts.
- Containerized services using Docker for quick deployment and hackathon-scale setup.

Employee Management System (EMS)   *Dec 2024 – Present*
Spring Boot, Angular, PostgreSQL, AWS, Docker, Jenkins

- Built robust Spring Boot REST APIs for employee/department management, dashboard metrics, and real-time data filtering (pagination, sorting, dynamic POST queries).
- Deployed PostgreSQL on AWS RDS and backend on AWS EC2 using .env-based secure auth and custom firewall rules.
- Containerized services using Docker and an automated CI/CD pipeline with Jenkins for both frontend (Angular) and backend (Spring Boot).
- Implemented CORS, centralized error handling, and DTO-layered clean architecture.
- Designed and connected metric cards API and department/employee charts (Chart.js).
- Future-proofed system with modular microservice-friendly design, aligning with Clean Architecture patterns.

Certifications

AWS Certified Cloud Practitioner – CLF-C02 (2025)

AWS Certified Developer – Associate – DVA-C02 (2025)

AWS Certified Solutions Architect – Associate – SAA-C03 (2025)

Oracle Certified Professional: Java SE 17 Developer – 1Z0-829 (2025)

AWS Skill Builder Badges: Cloud Essentials, Serverless on AWS, Cloud Quest Practitioner, AI Services, ML Basics (2025)