

Vatsalya Singhi

Full Stack Software Engineer | Angular, Node.js & Java

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Location: Schmalkalden, Germany



Professional Summary

Full Stack Software Engineer with 4+ years of experience building customer-centric, scalable, and high performance applications across web, mobile, and cloud ecosystems. Specialized in building end-to-end systems using Angular, Node.js/NestJS, Spring Boot, and cloud-native architectures. Recognized for transforming complex workflows into fast, reliable, and maintainable solutions in agile enterprise environments.

Work Experience

Full Stack Software Developer - CompuGroup Medical, Munich, DE

06/2025 – 12/2025

Tech Stack: Angular, TypeScript, NestJS, Node.js, Monorepo, PostgreSQL, Docker, AWS

- Developed end-to-end customer-facing features in a monorepo architecture using Angular and NestJS, covering UI components, business logic, REST APIs, and data-access layers.
- Owned modules including feature revivals, new feature development and optimizations.
- Improved large-scale export workflows by ~85%, reducing network + I/O overhead and dramatically improved runtime by replacing a costly truncate + insert pipeline with an optimized upsert-based differential sync for 1M+ records.
- Implemented unit, integration, and end-to-end tests to ensure high reliability and release stability in regulated medical software.

Software Engineer (Work Student) - Siemens Healthineers, Erlangen, DE

06/2023 – 06/2025

Tech Stack: Angular, TypeScript, RxJS, NgRx, Cypress, Karma, Jasmine, Azure, REST APIs

- Developed scalable, secure, and modular Angular components, improving UI/UX, platform speed, and maintainability, while refactoring legacy applications to enhance security, stability, and scalability.
- Boosted platform performance by 20% in a federated learning project using optimization techniques such as lazy loading, AOT compilation, caching strategies, tree-shaking, advanced change detection (OnPush, trackBy), HTTP caching, and memory leak prevention.
- Implemented Test-Driven Development (TDD) with Karma and Jasmine, increasing code coverage, reducing bugs by 25%, and minimizing manual testing efforts.
- Actively contributed to Agile ceremonies, code reviews, and architectural discussions, improving delivery predictability and raising engineering quality standards.

Software Engineer (Work Student) - Carl Zeiss AG, Oberkochen, DE

09/2022 – 05/2023

Tech Stack: React.js, Tailwind CSS, Redux, TypeScript, REST APIs, React Testing Library

- Designed and developed modular, scalable components for a cloud-based machine learning application using React, Tailwind CSS, and Redux, improving efficiency and scalability.
- Built responsive, accessible, and high-performance front-end experiences with React.js, following best practices in UX, component-based architecture, and maintainability.
- Reduced manual testing by 30% by implementing Test-Driven Development (TDD) with React Testing Library, automating test execution, and improving overall code reliability.

Software Engineer - [CanGo Networks](#), Chennai, IN

09/2020 – 08/2021

Tech Stack: Angular, Ionic 5, Spring Boot (Java), PostgreSQL, Capacitor/Cordova, Google Map API

- Developed award-winning end-to-end cross-platform web and mobile applications across Angular/Ionic frontends and Spring Boot backend services, enabling secure real-time data collection for 5,000+ telecom partners, and earning Employee of the Month.
- Built RESTful backend services using Spring Boot, implementing business logic, validation, and persistence layers, while designing and querying PostgreSQL schemas for scalable, enterprise workflows.
- Built a custom Angular observability dashboard mirroring key Grafana functionalities, featuring real-time log streaming, interval-based updates, and Chart.js visualizations, improving operational visibility without requiring users to switch to external Grafana instances.
- Designed and integrated a scan-tag feature replacing manual paper-based processes, reducing operational turnaround time by 10x, while integrating Google Maps APIs for seamless navigation.

Software Engineer - [Gethu Games](#), Chennai, IN

09/2018 – 04/2020

Tech Stack: Angular, Ionic, Capacitor, Express.js, Firebase

- Developed and owned end-to-end web and mobile application features across Angular/Ionic/Capacitor frontends and Express.js backend services, improving system efficiency by 40% through Test-Driven Development (TDD) and adherence to the Single Responsibility Principle (SRP).
- Designed and implemented RESTful APIs and core backend business logic and integrations using Express.js, while modeling application-specific data schemas in Firestore and Realtime Database to balance performance, scalability, and data consistency.
- Architected and deployed cloud-native applications on Firebase (Authentication, Firestore, Realtime Database, Cloud Functions, Hosting), taking ownership of the full software development lifecycle.
- Improved application performance and reliability through backend optimizations, asynchronous Cloud Functions, and schema refinements, resulting in faster response times and increased user engagement.

Education

Master of Science in Applied Computer Science

[Hochschule Schmalkalden](#), Germany

08/2021 – 03/2025

Bachelor of Technology in Information Technology

[SRM University](#), India

05/2014 – 05/2018

Technical and Soft Skills

- Languages: TypeScript, JavaScript, Java, SQL, Golang
- Frontend: Angular, NgRx, RxJS, HTML5, CSS3/SCSS, Ionic
- Backend: Node.js, NestJS, Express.js, Spring Boot, Authentication (JWT/OAuth2)
- Databases & ORM: PostgreSQL, Firestore, Realtime Database, TypeORM
- Cloud & DevOps: AWS, Azure, Docker, Kubernetes, CI/CD, Monorepos, Microservices
- Testing: Jasmine, Cypress, Karma, Angular Testing Library, TDD
- Tools & Protocols: WebSockets, WebRTC, Git, SonarQube, Postman
- Soft Skills: Agile/Scrum, code reviews, collaboration, system design, problem-solving

Publications

- Smart Surveillance System using Convolutional Neural Network (2018)

Languages

- English: Fluent (C2)
- German: Elementary (A2)