

Sumeet Singh

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Principal Software Engineer with 11+ years of experience in building and deploying enterprise-scale software solutions. Expertise in software architecture, microservices, distributed systems, cloud technologies, and agile methodologies.

CORE COMPETENCIES

- Defining architectural principles and design patterns for resilient, loosely coupled microservices and web applications, driving maintainability and scalability.
- Establishing a DevOps-driven approach to automate the build, deployment, and monitoring on cloud platforms, leveraging cloud-native technologies to meet fluctuating demand
- Incorporating innovative practices such as service mesh and event-driven architectures to enhance the microservices' capabilities
- Leading cross-functional collaborations with product owners, architects, software developers, and external stakeholders to interpret business challenges, and implement data-driven solutions aligned with strategic objectives
- Providing technical leadership in a fast-paced Agile environment, setting coding standards and guidelines
- Prioritizing effective communication by sharing relevant information with the team at the appropriate time and detail, fostering a culture of coaching and mentoring

TECHNOLOGIES

- **Programming Languages:** Java, JavaScript, Typescript, SQL, HTML, CSS, WebGL
- **Frameworks:** Spring Framework, React, Angular, Express.js, Electron JS, Stencil, Web Components, Ionic, Hibernate/Eclipse Link/JOOQ, RxJS
- **Cloud:** AWS, Kubernetes (AWS EKS, OpenShift, GCP), Cloud Foundry, Docker
- **Event Streaming:** Kafka, RabbitMQ, IBM MQ, Redis, AWS SQS, MQTT
- **Relational and NoSQL Databases** (PostgreSQL, Oracle, MongoDB, Couchbase, Redis, IndexDB for the Web, MySQL)
- **Tools:** Rally, JIRA, Git, Jenkins, Gitlab, HELM, Kustomize, Figma
- **Embedded Analytics, Monitoring & Observability:** Open Telemetry, Jaeger, Grafana, Prometheus, fluentD, Kibana, Sisense, Dynatrace, Datadog
- **Testing, Security & Code Analysis:** Jest, Mocha, Jasmine, Selenium, JMeter, Mockito, JProfiler, Web driver BiDi, Puppeteer, Cypress, Polaris, Blackduck, SonarQube

EXPERIENCE

WABTEC (Westinghouse Airbrake Technologies)

Chicago, Illinois

Principal Software Engineer

2024-Present

Sr. Staff Software Engineer

2023 – 2024

Staff Software Engineer

2021 – 2023

Senior Software Engineer

2019 – 2021

- Design distributed systems and implement components for enterprise-scale software solutions, leading design discussions and troubleshooting issues

- Collaborate with customer operations team, product, and industry SMEs to define and refine product requirements
- Develop multi-year software delivery strategies, and define SAAS business model with leadership
- Drive efficiency by building reusable libraries and components
- Collaborated closely with customer and cross-functional teams to understand requirements, address challenges, and ensure successful product delivery.

NextGen Terminal Operating System (NGTOS) is an inventory, operations management, and scheduling solution for railroad intermodal terminal operations. NGTOS, built on cutting-edge technology, addresses the needs for automation and operational optimizations.

Field Execution Windows Tablet App (FLEX) allows equipment operators and crew members to report work as per the optimized plan generated by NGTOS.

- Helped define & execute strategy to remove redundant data processing steps and add redundancies to single points of failures.
- Drove the transition of the user web application to angular components from Polymer.
- Designed and built foundations for real time live updates for the web application, using web sockets, Redis and Kafka.
- As a Staff software engineer role, led negotiations, design decisions and agreements with customer technology solutions teams for defining the deployment architecture for on-prem OpenShift container platform. This included key foundational decisions including migration to Kafka from RabbitMQ, Oracle Database support, legacy mainframe integration ICD's, 3rd party system integrations and networking/communication setup.
- Solved the challenge of limited network connectivity by architecting an offline-first solution for the Windows tablet application, delivering a superior user experience, and gaining a competitive advantage.
- Played a pivotal role in the successful initial product launch in August 2023. I was recognized by leadership on both sides for my significant contributions during this product launch.
- Currently working with cross-functional teams to deliver a solution for railroad intermodal terminals.
- As Principal software engineer, I am working on defining and implementing strategies to solidify the product foundations while bringing more 3rd party system integrations, providing end users the ability to run operations from a single point, reducing decision making overhead, ensuring users are able to focus on important exception handling processes.

Volt Design System & Component Library is Wabtec's internal web application UI design system and component library. Built using Stencil and complies with Web Component standard, the component library is framework agnostic and can be used with major UI development frameworks like React, Angular and VueJS.

- Served as a key member of the leadership team responsible for building a reusable component library
- Collaborated closely with UX designers and developers from a vendor team to ensure the component library met user experience and technical requirements
- Provided subject matter expertise in UI development and front-end engineering to guide the design and implementation of the component library

- Contributed to the overall success of the project by facilitating cross-functional collaboration and driving the development of high-quality, reusable UI components

GE Transportation

Chicago, Illinois

Senior Software Engineer

2018 – 2019

Software Engineer

2016 – 2018

Smart Automotive Terminal (SAT) (Web App) & Inspections Hybrid Mobile App is a railroad automotive terminal inventory, and operations management, which tracks vehicle movement between rail operators, automotive dealers, and manufacturers. The project aims to streamline processes, operations and minimizes manual reporting which boosts operational capacity and reduces costs for railroad corporations.

As a full stack developer, I joined the team and filled the gap of a resource who could understand the intricacies of micro service architecture as well as lead the front-end development. We worked on cutting edge micro service-based backend architecture and bleeding edge front end technologies like Angular, Polymer & Typescript.

I defined the front-end architecture as well as coached/mentored the team on UI technologies/frameworks. Besides this, I also took up tasks as the sole UI developer on the team to work with UX and guide their efforts to build prototypes as per product requirements meanwhile ensuring the designs could be delivered in strict timelines.

Oranj

Chicago, Illinois

Frontend Engineer

2016

Oranj Advisor & Client Engagement Platform

Collaborated with business analysts and UX designers to build user interface mocks and redesign applications for minimum viable products, including the Oranj Advisor Portal and Oranj Client Dashboard.

At Oranj, I joined as a frontend software engineer to work with the offshore Team, bringing the product development up to speed and enabling the Team with top notch build and deployment tools. My role in the team consisted of multiple responsibilities, ranging from a full stack developer to playing a major part in the design & architecture of the application.

Morgan Stanley (Infosys Technologies Ltd, Vendor)

Chandigarh, India

Senior Systems Engineer

2015

Systems Engineer

2013 – 2015

Developed proof of concept applications for cross-platform development and implemented web applications and services using Agile methodologies and CI/CD practices, contributing to projects for Morgan Stanley, including SPC Mobile, IRRG Incident Tracker, and Stock Plan Connect

EDUCATION

MS in Information technology (MS IT/MIS)

2015 – 2016

Northern Illinois University | Illinois

Bachelor of Technology in Electronics & Communication Engineering

2008 – 2012

Punjabi University | Punjab, India