

Karanraj Duraikannu

Software Engineer

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Summary

Senior Software Engineer with 6 years of experience in architecting and delivering full-stack solutions. Proven ability to lead projects focused on application modernization (React to TypeScript conversion), performance optimization, and implementing robust test automation strategies. Combines technical expertise in Java and React with deep knowledge of DevOps, including containerization and orchestration, to enhance team productivity and ensure seamless, high-quality product delivery.

Technical Skills

- **Languages:** JavaScript (ES6), TypeScript, Python, HTML5, CSS3, Java
- **Frameworks/Libraries:** ReactJS, NextJs, [Express.js](#), Node.js, jQuery, Webpack, Babel, Ant Design, Tailwind CSS
- **Databases:** MySQL, Postgres, MongoDB
- **DevOps/Tools:** Docker, Kubernetes, GitLab CI/CD, Git, VS Code, IntelliJ, PyCharm, Airflow, Nginx, Postman, JMeter, Selenium, Vitria
- **Methodologies:** Agile, RESTful APIs

Professional Experience

Tech Mahindra — Senior Software Engineer

September 2024–Present, Bangalore

- Engineered a front-end user interface with **React.js** with **Javascript** and **NextJs** with **Typescript**, implementing forms that interact with a RESTful API to manage data.
- Automated web application testing using **Selenium WebDriver** with Javascript, resulting in a **50% reduction in manual testing efforts**.

- Integrated automated tests into the gitlab CI/CD pipeline to ensure faster and more reliable deployments.
- Utilized the **React.js** library to create a dynamic UI with form functionality, enabling data submission and retrieval through REST API calls.
- Designed and implemented interactive forms using React.js, handling all API-based communication for data submission and retrieval.
- Optimized React application performance for large datasets, resulting in faster load times and a smoother user experience.
- Improved application responsiveness and performance when handling large datasets by implementing targeted optimization techniques.
- Automated UI regression testing using Selenium to ensure data integrity and quality assurance across the web application.
- Developed a Rapid Infrastructure Automation (RIA) application with a user-friendly workflow to streamline and automate bare-metal provisioning and OS deployment through the MAAS API.
- Managed the end-to-end incident lifecycle from proactive detection in Vitria logs to resolution and closure, acting as a key operations team member.
- Reduced Mean Time to Detect (MTTD) and Mean Time to Repair (MTTR) by configuring Vitria logs to focus on actionable alerts and facilitate rapid issue remediation.
- Automated critical network management tasks using Business Process Automation (BPA) tools, standardizing workflows for onboarding and decommissioning routers.
- Write **python** automation to handle the day-to-day activities to send test data and make sure the expected data using assert.
- Developed automated workflows to ensure network configurations remained current and compliant by updating router licenses and IP addresses.

Orion Data Governance — Product Engineer

August 2019–September 2024, Bangalore

- Led the development and optimization of large-scale enterprise applications using **React, JavaScript, TypeScript, Node.js, and Java**, resulting in improved user experience and performance.

- Spearheaded a project to refactor existing ReactJS applications from Javascript to TypeScript, significantly improving code quality and long-term maintainability.
- Developed scalable, RESTful APIs using the **Spark Java** framework with integrated authentication validation to support microservices architecture.
- Engineered a core **Java** microservice to integrate with multiple external platforms, including Slack, Microsoft Teams, Jira, and ServiceNow.
- Automated UI regression testing using **Selenium** with **Java and Python**, reducing manual effort and preventing human errors.
- Built and integrated automated API testing with **Postman** and **Airflow** to validate API responses and performance, accelerating product delivery.
- Implemented Docker for containerizing services such as databases, UI/Nginx, and middleware, streamlining development and deployment processes.
- Performed load testing with **JMeter** to identify system bottlenecks, ensuring application stability and optimal performance under heavy traffic.
- Improved test coverage and accelerated bug detection by designing modular and reusable test scripts, incorporating design patterns like the Page Object Model.
- Collaborated with a distributed team using **GitLab** for version control and **CI/CD**, promoting modern development practices.
- Integrated automated testing into **CI/CD** pipelines to ensure faster, on-time product delivery and to minimize human error.

Freelance

Full Stack Developer | AVR Energies

Nov 2025 – Present

- **Tech Stack:** Next.js, Express, MongoDB, Ant Design, Tailwind CSS.
- **Development:** Building a high-performance web platform for renewable energy services, utilizing **Next.js** for SEO-friendly rendering and **Tailwind CSS** for responsive UI.
- **Backend:** Architected a scalable REST API using **Express** and **MongoDB** to manage dynamic project data and user inquiries.

- **UI/UX:** Leveraged **Ant Design** to deliver a professional, enterprise-grade interface, reducing design-to-development time by 30%.

Education

Bachelor of Engineering in Computer Science

SVS College of Engineering, Coimbatore.

Graduated 2019

Personal Details

Date of Birth: 31 July 1997

Language: Tamil, English

Nationality: Indian

Marital status: Married

Native: Madurai, Tamilnadu.