

KARTHIKAYAN SELVARAJ

Chennai, India | +91 8056491272

skarthikayan7@gmail.com | <https://karthikayan.in>

SENIOR SOFTWARE ENGINEER

Experienced Senior Software Engineer with over **8 years** of expertise in **React.js** and **Node.js**. Highly **goal-oriented** and consistently **seeking new challenges** to refine and expand my skills. Eager to take on roles that leverage and enhance my abilities in cutting-edge technologies.

SKILLS

- | | | |
|-------------------------|--------------------------------|-----------------------|
| • React.js | • React Testing Library | • PostgreSQL |
| • Node.js | • Redux | • Git |
| • HTML & CSS | • Typescript | • Docker |
| • JavaScript | • Express.js | • AWS |
| • Jest | | • Microservice |

WORK EXPERIENCE

Tata Consultancy Services

November 2016 - Present

- Responsible for design, development and maintenance of **React.js** and **Node.js** web applications.
- Accountable for **making strategic decisions** regarding application architecture, technology stack, security and development practices.
- **Ensure the application meets business requirements** and industry standards. Balance technical feasibility with business requirements.
- **Write clean, efficient, and maintainable code.**
- Assign Tasks, set priorities and conduct **code reviews**.

EDUCATION

B.Tech - Electronics and Communication

2012-2016

Sri Manakula Vinayagar Engineering College, Puducherry

PROJECTS

Online Coding Platform

2020 - Present

- This application enables users to **access a cloud coding environment directly from browser**.
- Developed **REST APIs** using Node.js and **Frontend** using React.js.
- Created reusable **Docker images** for multiple sandbox environments.
- **Created shell and node scripts** that will evaluate the user submitted code.
- This **reduced the cost** for provisioning coding environment by 50%.
- **Integrated microservices** to the application using **HMAC authentication**.
- Created **Gitlab runner in CI/CD pipeline** to scan docker images for vulnerabilities.
- Integrated the application with **SAML SSO** for user authentication.
- Created **custom express middleware** to handle **role-based authorization**.
- Used **Jest and Supertest** to write unit test cases for the application.

Online Learning Platform

2016 - 2020

- Developed **responsive web UI** using React.js for the web applications that enables users to take **online courses and assessments**.
- **Revamped the legacy code base** to latest react version which improved the application performance. Worked with **both Class and functional components**.
- Developed frontend for **support ticket management** system, a web application to manage customer tickets.
- Worked with both **Webpack and Vite** to bundle the application.
- Developed frontend for **admin interface**, a web application to create and manage the contents for the learning application.
- **Created custom react hooks** to modularize redundant logic in the applications.
- Integrated **Redux state management** to handle complex state logics.
- Implemented **theme switching** using **React Context API**.
- Integrated **React-TanStack Query** to fetch and cache server state in UI.
- Used **React Testing Library (RTL) and Jest** to test the application.

ACHIEVEMENTS

- Participated in the TCS Innovista 2025 event, where my entry was showcased to the jury in the pre-finals.
- Cleared the Direct Capability Assessment in TCS and got promoted to digital cadre.
- Star performer of the ILP training batch.