

Vivek Patil

SOFTWARE DEVELOPER

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SUMMARY

Dynamic **Software Developer** with 2+ years of expertise in **IoT, AWS, Node.js, React.js**, and **AI technologies** like **TensorFlow, Neural Networks**. Proven track record in delivering impactful solutions, including the **Connected Vehicle Platform** at **Tata Motors**, where I worked with senior leadership to enhance system reliability and develop innovative **PoCs**. Adept at building scalable, high-performance applications and driving cross-functional collaboration to achieve business goals. Passionate about leveraging technology to solve complex problems, with a particular focus on **AI/ML** for **predictive analytics** and system optimization.

EDUCATION

MIT Art, Design & Technology University, Pune

B.Tech Computer Science and Engineering – Intelligent Systems

2019 – 2023

EXPERIENCE

Tata Technologies | Tata Motors (Client)

Solution Developer (Jan 2024 – Present)

- Worked on-site with senior leadership to enhance the Connected Vehicle Platform (CVP) Project, improving platform reliability by 20% and reducing outages by 15%.
- Delivered 5+ PoCs using IoT, AWS, Node.js, and React.js, including a full-stack telemetry app that cut data latency.
- Optimized RESTful APIs, boosting communication efficiency, and led predictive analytics integration with Tata Elxsi, increasing processing speed.
- Conducted performance benchmarking, improving system efficiency, and developed real-time diagnostics, reducing vehicle downtime by 25%.
- Authored technical documentation and trained teams, driving adoption of CVP solutions across departments.

Graduate Engineering Trainee - (GET) (Jan 2023 – Jan 2024)

- **IoT Solutions Development:**
Contributed to the deployment of IoT-based connected vehicle solutions, focusing on scalability and cost-efficiency, which led to a 25% reduction in operational costs for certain processes.
- **Real-Time Diagnostics Application:**
Designed a cloud-native app for real-time diagnostics, reducing vehicle downtime by 20% through early fault detection and streamlined issue resolution.
- **Team Enablement:**
Created detailed technical documentation and conducted training sessions for cross-functional teams, increasing platform adoption by 30% across departments.

PROJECTS

- **Connected Vehicle Platform (CVP)**
Tata Motors | Tata Elxsi
- **Technologies Used:** IoT, Node.js, AWS, React.js, ThingWorx, **Grafana, Prometheus, MQTT**
 - Worked directly with Tata Motors and Tata Elxsi teams on the Connected Vehicle Platform (CVP), contributing to real-time monitoring and predictive maintenance for Tata Motors' fleet of connected vehicles.
 - Led the integration of IoT solutions and predictive analytics using AWS and ThingWorx to enhance vehicle health monitoring, reducing downtime by identifying potential issues before they occurred.
 - Collaborated with shop floor mechanics and ground-level teams to gather real-world data and optimize vehicle performance, ensuring the platform met both operational and user needs.
- **Engineering Service Design and Outsourcing (ESDO)**
Tata Motors | Strategic Business Planning Department | Digital Product Development Solution Department
Technologies Used: TypeScript, React.js, Node.js, PostgreSQL, CI/CD
 - Contributed to a high-impact project aimed at improving engineering services for Tata Motors. Involved in the entire project flow, from IPA and synopsis creation to commercial discussions, PO creation, and issuance.
 - Involved in milestone planning, commercial discussions, and Project Manager assignments, ensuring alignment with client needs and business goals.
 - Collaborating with Chief Engineers and other stakeholders to define technical specifications and scope for the project.
 - Designed and developed robust web applications with TypeScript and React.js, ensuring a responsive and user-friendly interface.
 - Leveraged Node.js for backend services, using PostgreSQL for data management and ensuring high availability and data consistency.
 - Implemented CI/CD pipelines to automate deployment processes, enhancing development speed and system reliability.

TECHNICAL SKILLS

- **Programming Languages:** JavaScript, TypeScript, Node.js, React.js
- **Databases:** PostgreSQL
- **Web Technologies:** HTML5, CSS3, TypeScript, React.js, Node.js
- **Cloud & DevOps:** AWS, CI/CD, Docker
- **Communication Protocols:** MQTT, HTTPS
- **IoT Tools:** ThingWorx, Grafana, Prometheus
- **Machine Learning & AI:** TensorFlow.js, Generative AI, Predictive Analytics

CERTIFICATION

- **Deep Learning Specialization**
- **Browser-based Models with TensorFlow.js**
- **DeepLearning.AI TensorFlow Developer Specialization**

- **Machine Learning Specialization**
- **Convolutional Neural Networks in TensorFlow**
- **Natural Language Processing in TensorFlow**

AWARDS

- **CODE BREAK 3.0 – NATIONAL LEVEL HACKATHON (Team) - Winner**
- **KPIT NOVA Hiring Hackathon – Winner**
- **NSBEHacks 21' - GitHub - Winner**