

Pune, India
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Shrikant Hiwase

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- Dynamic AI/ML leader with over 5 years of experience driving innovation in automotive AI, data analytics, and Generative AI, delivering customer-centric solutions for Electro-mobility and connected vehicles.
- Proven expertise in leading AI/ML teams, developing predictive models and Gen AI based automotive applications. With multiple research published at SAE conference.

Core Competencies

AI/ML & Data Science: Machine Learning, Deep Learning, GenAI (RAG, LLMs), AI Frameworks, Data Analytics.
Tools & Technologies: Python, Pytorch, scikit-learn, Tensorflow, MATLAB/Simulink, Tableau, and JavaScript.
Automotive Systems: Connected Vehicles, Telematics, CAN/J1939, BMS, EV Powertrain, ADAS
Soft Skills: Analytical Thinking, Public Speaking, Cross-functional Collaboration, Ownership, Leadership.

Work Experience

Product Manager	Tata Motors Ltd.	Feb 2023 - Present
ERC (Advanced Technology) AIML Virtual Validation/	Pune, India	
- Established and led the AI/ML team of 10, creating a strategic roadmap to drive innovation in advanced engineering initiatives. - Acted as the idea center, conceptualizing and executing projects aligned with AI/ML, focusing on Customer, Product and Process Improvement areas. - End-to-end development of battery (BMS) fault Prognostics, from data cleaning, Feature Engineering, model selection & training to deployment on edge hardware ensuring a high accuracy and functionality on vehicle. - Conceptualization and Development of Driving Behavior assist from designing architecture, Developing POC to generating requirements and collaborating with supplier for scaling and deployment on cloud. - Led PoCs evaluating open-weight LLMs (e.g., LLaMA, Mistral) and customized fine-tuned models for domain-specific GenAI use cases in electric vehicle servicing and driver support systems. - Conducted user research and collaborated with cross-functional teams (engineering, UI/UX, data science) to translate pain points into GenAI feature sets, - End-to-end design and development of Gen-AI applications like RAG based service assist, RFQ generator. - Led other AI initiatives for process improvement and DM cost optimization utilizing Langchain Framework and local LLM use cases using Hugging face, Ollama frameworks. - Presented the Prognostics and Service Assist at Technology Day Mar'25 at Tata Motors. Implemented ASpice Level 3 process as per PAM 3.1 and achieved ASpice Implementer Certification.		

Achievements

- Presented the Prognostics and Service Assist at Technology Day Mar'25 at Tata Motors.
- Recognized to present at PSE TechTalk at TML
- Two Ideas accepted for Notarization.

Deputy Manager	Volvo Eicher Commercial Vehicles Ltd.	2020 - 2023
New Product Development (R&D)	Indore, India	
Predictive Maintenance through use of Machine Learning and AI on cloud data - Engine overheating prediction using GMM and achieved 90% accuracy. - Development of model to monitor battery and alternator health with 95% accuracy. - Development parameter-based model for intake system failure prediction. Achieved 90% accuracy		

- **Development, Integration of FMS-Gateway for HD segment (Volvo Platform)**
 - Identification of hardware and software issue and performing DFMEA with Volvo Sweden Team.
 - Identification and rectification of issues through telematics data analysis.
- **Crash Alert Based on Inbuilt Accelerometer Sensor of Telematics ECU**
 - Performing vehicle trials on specialized tracks at NATRAX for data Acquisition
 - Develop Crash alert model using MATLAB to perform digital signal processing on the data to optimize Kalman Filter and deployment on vehicle firmware.
- **Connected ADAS & Aftermarket Solutions Development (IoT)**
 - Developing Remote Immobilizer for connected vehicles for aftermarket customer solutions
 - DFMS & TPMS (POC and implementation with device partners)

Achievements

- Honored with multiple awards: Innovator of the Month (May 2022), TBEMF Star of the Month (April 2022), Star of the Month (June 2021), and Best Innovation Display Stall (Technology Day, December 2021).

Research Assistant

ARAI Academy.

2019 - 2020

Pune, India

- Designed and simulated a thermal management system for Lithium-Ion Battery Pack
- Used NTGK model and conjugate heat transfer analysis on MATLAB Simulink and Ansys environment with convective and liquid cooling strategies

Jr. Engineer

KPCL

2016-2017

Pune, India

- Process Mapping for Quality Locomotive Gears manufacturing processes.
- Establishing a process to ensure consistent quality of Gears.

Research Work

- Engine Overheating Prediction with Machine Learning using Gaussian Mixture Model (GMM), 10th SAE India International Mobility Conference. DOI: 10.4271/2022-28-0007.
- Predictive Maintenance of Automotive Component Using Digital Twin Model, 10th SAE India International Mobility Conference. DOI: 10.4271/2022-28-0075.
- Optimization of Kalman Filter on Accelerometer Data for Automotive Safety Applications, 10th SAE India International Mobility Conference. DOI:10.4271/2022-28-0110.
- Telematics Smart Testing and Validation Tool, 10th SAE India International Mobility Conference. DOI:10.4271/2022-28-0092.

Education and Certifications

- M.Tech. (Automotive Technology) from College of Engineering (COEP), Pune, India (8.25 CGPA) **2018-2020**
- B.E. (Mechanical Engineering) from GH Rasoni College of Engineering, Nagpur, India (8.51 CGPA) **2012-2016**
- HSC (Physics, Chemistry, Maths, Computer Science) (82.33 %) **2011-2012**

Extracurricular Achievements

- Winner of Boat Race Competition, at GHRCE, Nagpur 2015 President's Award
- Ranked 1st in Best Floor decoration competition for Diwali in 2021 at VECV.
- Director for the best Skit for Antaragini college gathering event in GHRCE, Nagpur