**SABARI VEL R**

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## Professional Summary

Automobile engineering professional with 6.5 years of experience in diagnostics, engine calibration, and validation. Proven expertise in diagnostic content development, emission norms, vehicle communication networks, and advanced driver-assistance systems (ADAS). Adept at problem-solving, validation testing, and utilizing various technical tools and software to enhance vehicle diagnostics and customer satisfaction.

## Skill Set

* Engine Testing, Calibration & Validation
* **Simulators -** Samtec HSX/HS+, Vehicle Simulator Interface(VSI), Nexes(Bosch), CANdela Studio, CANoe
* **Automobile Technologies & Protocols –** ADAS, BS-6 Emission norms**,** Immobilizer & CAN, UDS, K-Line, GMLAN, DoIP, KWP2000
* **Sensors** - Front View Camera (Mono & Stereo), Millimeter wave radar, Ultrasonic sensor, Panaromic view camera, Reverse camera, Steering angle sensor.
* **SW Tools** **&** **Service Information Tools** - SVN repo, Jira, ODX framework & ESI [tronic], BDX.
* **HW diagnostic tools -**  Inca, Visu, Autel, SnapON, Launch X-431, G-scan, K-tag, Hexprog, Encore, ADS625, Safelite, Hunter and OEM Aftermarket diagnostic tools of Volkswagen/Audi/Porsche, Hyundai/Kia/Genesis, Nissan, Toyota, Subaru, BMW, Volvo, Ford, GM and Stellantis.
* Good knowledge in BS-6 Engines with ATS Setup and able to understand technical problem in engines.
* **Instruments Known-** AVL smoke meter, AVL Blow by meter& AVL Air flow meter, Cylinder pressure & combustion analysis, belt tension meter, AVL fuel flow meter.

# Professional Experience – Roles & Responsibility

**US Technology International Private Limited**

**Client - Bosch Global Software Technologies - Coimbatore, India May 2021 – Jan 2025**

***ADAS Diagnostic Engineer***

* Experience in diagnostic C**ontent authoring, Validation** & **Bench testing** of various diagnostics systems
* Experience in creating test specification design and Designed **Guided wizard** to help vehicle technicians run ADAS calibration test sequentially based on **OEM technical bulletins & repair manuals.**
* Hands on experience in diagnostics validation for **Central gateway ECU**.
* ECU Programming and Sensor calibration using **CAN/UDS, CAN FD, DoIP** and **KWP2000** protocol and bench tested them on simulators such as **VSI, Nexes, CANoe** and **Samtec HSX/HS+**.
* Vehicle knowledge with ADAS controllers for calibration/Reset functions
* Module lead for ADAS research team and conducted a **Foresight analysis** on ADAS systems such as **LKAS, LDW, ACC, EPB, Collision Warning, Blind-spot Warning** in North American automobile market to find gaps in coverage.
* Experience in extracting the **ETI** and **ODX** data.
* Experience in extracting data from **BDX** to develop content for various test frames on ADAS calibration
* Able to extract **service manuals** from OEM portals and able to do reverse engineer with multiple OEM tools.
* Experience in resolving the vehicle level **TSS report** from the customer end and also analyzing the low level test cases from the blackbox report.
* Resolved **Jira issues** raised by clients using BlackBox logs from vehicle and provided **remote technical support**.
* Supervised **3 member team** to improve existing ADAS calibration test while also developing new coverage for latest vehicles based on **requirement analysis** (DOORS).
* Analyzed by **Reverse Engineering** OEM and competitor tools to develop new calibration tests and display DTC & data stream (DID).
* Illustrated instructions for calibrations in **Gas, Hybrid and Electric vehicles from major automobile brands.**
* Took initiativeto organize **LLBP meeting** twice every month to improve process quality.

**National Auto Garage – Coimbatore, India July 2020 – April 2021**

***Junior Engineer***

* Hand on Experience in Diagnostic tests for engine, transmission, exhaust system, brakes, and other major components
* code reading, clearing functionality and view data readouts from various sensors.
* Worked with Diagnostics Tools & Technology (**Launch X-431, G-scan, K-tag, Key Programming**)

**Jayem Automotives Pvt Ltd – Coimbatore, India Jan 2019 – Mar 2020**

***Engine Testing Engineer***

* Conducting various tests on engines, including calibration validation, mechanical development, durability testing, performance testing, and after-treatment testing such as DPF and SCR systems in compliance with BS VI emission norms
* Hands on experience in automotive **wiring harness, sensors** & **actuators**
* DTC list preparation as per TML standard & Malfunctions trails for all **DTC** validation
* Communicate (CAN, K-LINE) ECU & Trouble shoot engine with calibration tool **INCA, VISU** & Diagnosis for engine endurance testing
* Testing of prototypes for product & engine calibration validation
* Monitor the characteristics and failures during the calibration, testing trials & prepare failure reports, take the necessary countermeasures to solve the concerns and reporting the details of testing to TML and managing day to day activities
* Support the existing test bench modification for new project engine
* Preparing complete programming of IASYS 3.6 test bed operating Software as per the protocol given by TML
* Sound knowledge of engine dynamometers, test bed preparation,test instrumentation and data acquisition
* Prepare testing check lists and perform testing and validation on the test bed

Hands on experience in following testing in all TML:

* Endurance test
* Performance test
* Full Load Full Speed test (FLFS)
* All component validation test
* Oil consumption test
* Pollution test

**National Auto Garage - Coimbatore, India July 2018 – Dec 2018**

***Training***

* Have undergone training in auto electrical works, auto electronics, car A/C repairs, mechanical works, and also experienced in scanning and diagnosing new-generation cars and fixing problems

## Education & Academic Projects

**SNS College of Technology – Coimbatore, India 2014 – 2018**

Bachelor’s Degree in **Automobile Engineering | CGPA: 7.2**

**Projects**

**Smart cycle fabrication:** The main objective of the project is to reduce the recurring investment in buying new bicycles as a child grows. This is achieved by designing an adjustable frame that can expand or contract to suit the rider's size. As a result, the same bicycle can be used by both young children and growing adults, eliminating the need to purchase different-sized bicycles

## **Achievements**

* Achieved multiple Spot Awards for consistent, on-time project delivery and cross-functional collaboration—highlighted by Toyota’s Front Camera Coverage initiative and appreciated by the customer manager.
* Recognized as Best Performer in the North American team at Bosch for Q3 2021, Q2 2023, and Q1 2024, demonstrating consistent excellence and impact across multiple quarters.

## **Industrial Training Experience**

Gained practical, hands-on experience in automotive service, diagnostics, and workshop operations through inplant training at reputed service centers:

Rajshree Ford, Coimbatore, India **21st Dec 2015 to 26th Dec 2015**  
Assisted in vehicle inspection, service scheduling, and quality checks

**Ambal Auto – Maruti Suzuki, Coimbatore, India 7th Nov 2016 to 10th Nov 2016**  
Exposure to routine maintenance, customer handling, and service workflow

TAFE Access Limited, Coimbatore, India **29th Nov 2017 to 2nd Dec 2017**  
Learned tractor servicing, parts management, and preventive maintenance

NTC Logistics – Service Center, Namakkal, India **30th Jan 2018**  
Insight into fleet maintenance, heavy vehicle servicing, and logistics support systems.

## **Soft Skills**

* Effective communication with multidisciplinary teams
* Strong collaboration and team coordination
* Client interaction and technical explanation skills
* Analytical thinking in real-time problem diagnosis
* Initiative in continuous process improvement
* Time management under tight project deadlines

**Declaration**

I hereby declare that the information provided above is true to the best of my knowledge.

**Place :**

**Date :** **Sabari vel Ravichandran**