

DAIMLER

Trucks and Buses - Principal Engineer - Mechatronics - Body Chassis and ADAS Domain Expert - HiL Validation

for Mercedes-Benz Research and Development India Private Limited

Contact

MBRDI Recruitment

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Job-ad-number

MER0000TT5

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Field of activity

**Research and Development incl.
Design**

Department

E-Drive & PT System Integration

Tasks

Job Description

Employment Location: MBRDI

This Position Reports to : Senior Program Manager

Objectives of the Job:

Total No. of Jobs assigned /Employees reporting to you

Lead a team of Hardware in Loop engineers specializing in Body Chassis HiL systems

Involves a very high level of technical and management co-ordination with Feature Owners, Partners and Project Stake holders.

Head of Departments

The aim is setup a cost effective Mechatronics HiL system with dSPACE/VT. Team member should be aware of the different HiL systems, setting up HiL systems, deriving best test scenarios and automating the validation. With teams spread across the globe, we follow agile processes. Team members should be aware of the challenges and constraints of HiL Validation, upcoming trends in automotive technologies. Team should be flexible to adapt to new HiL setup environment, different tool chain, different validation approaches, willing to work on one or more ECUs connected to the HiL.

Level 5

Level 6

Level 7

Level 8

Level 9

Total

Communication

With Whom?

Purpose?

Frequency

Constant

Frequent

Occasional

INTERNAL : With MBRDI Team

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EXT

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Qualifications:

Education

Bachelors or Master's Degree in Computer Science/Electrical & Electronics/ Masters in Computer Applications, Control Systems

8-14 years of experience in Software Validation activities including Test specification development and Implementation of Test Automation Framework by using Automation tools.

- Good understanding of SW Validation cycle 'V-model'.

- Must have played a key role in the complete lifecycle of at least 1 or 2 HiL testing projects.

- Must have a good exposure to Visual Basic scripting (or) scripting languages.

- Must have a good exposure on dSpace/ETAS/Vector HiL setups
- Must be aware of Communication protocols like CAN, LIN.
- Must have knowledge on Diagnostic protocols like UDS(i14229)
- Exposure to configuration management tools like SVN, DOORS is preferred.
- Exposure on testing tools like CANape, CANoe and PROVEtech:TA
- Knowledge on German or Japanese language preferred.

Experience

Type of Work:

- Strategize the roadmap for Hardware in Loop Systems (MiL, SiL, HiL) for a team of 20+ developers
- Synergize Product validation teams on Quality Processes and Methods
- Lead and co-ordinate multi-cultural, multi-location teams
- Team Skill Matrix and competence buildup

Areas of Work:

- Responsible for the Entire Hardware Support Activities for HIL Testing.
- Responsible for Lab, Inventory Management, Hardware Documentation, Hardware Design Proposal.
- Responsible for understanding the existing dSPACE and Vector HIL's and fix the whenever the problem occurs.
- Responsible to propose solution for new HIL designs.
- Responsible to find root cause for Hardware Issues and fix them.
- Support the HIL Test Engineers to identify defects in the ECU Hardware.
- Responsible for the Plant Model Development for ECU's under Mechatronics Domain.
- Develop real time Simulation Models using Mat lab/Simulink in support of real time testing of integrated controllers using Hardware-In-the-Loop (HIL) dSPACE/Vector VT Test Systems.
- Adapt and integrate Mechatronics ECUs with HIL bench.
- Integration of plant models from multiple vehicle domains to enable software verification on HIL benches
- Support validation engineers Hardware-In-the-Loop bench and test setups.
- Understanding of Vehicle Electrical Architecture and Subsystem/Features in Mechatronics domain.
- Good experience on Interface Model Development for HIL Systems with dSPACE/VT Systems.
- Understanding of basic Object oriented Concepts.
- Responsible for the Validation of ECU functions.
- Responsible for Requirement Analysis, effort estimations and work breakdown.
- Responsible for understanding the system and writing Test Specifications from the requirements, Test automation on dSpace/Vector HiL environment, execution of Test automation framework and reporting test defects to ensure that 100% Software test coverage.
- Responsible for all the activities of the Hardware-in-the-Loop team with an aim to improve the overall Competency within the team.

- Responsible for Scripting/Programming with existing Libraries/Classes
- Able to create Local/Global Functions enabling high degree of Automation
- Analysis of any failure, fix problems due to Syntax /Programming Steps (independent of tool support - less number of syntax errors from compiler, less number runtime errors)
- Handle the interfaces with Excel/Text pad/word for report creation, Interface with Dante/Doors for traceability, Interface with MATLAB Plant model
- Analysis of any failure - Test Step Improvements, Suggestions in Programming
- Providing recommendation for a New programming Architecture
- Solve complex real time problems in a holistic way (System function and Programming Issues)
- Work Closely with tool support team to drive new SW initiatives across teams
- Enabling high degree of Automation which improves efficiency
- Knowledge sharing session to other teams
- Mentor the team members on Programming/Scripting topic
- Responsible for the end to end validation of different ECU functions.
- Collection and Breakdown of complex requirements through good Domain and System knowledge
- End to end project management for the assigned project which includes delivery, risk management and trouble shooting
- Responsible for Identification and facilitation of KPIs in the project to improve on Quality and efficiency
- Preparation of Dashboard reports for Senior management on different KPIs
- Coach and Mentor teams on technical / domain / testing aspects
- Effective stakeholder management (partner, internal MBRDI) in development, processes, improvises the processes

Specific Knowledge: (Skill / Languages etc.)

- Excellent communication
- Passionate on HMI development

Main Task Description

(Include key result areas of the position)

Time Spent

(in %)

1.

Requirements & test specification understanding

2.

Software Architecture / Component designs

3.

Test defects analysis and validation report preparation

4.

Training & support other members

Budget / Cost Responsibility:

Power of Authority:

Declaration of commitment / compliance reminder:

This Job description comply with all Group and location rules and regulations, guidelines and works agreements, etc. that apply for the area of responsibility transferred are complied with or applied. The jobholder holding the position mentioned in this job description shall always ensure adherence to the relevant compliance regulations, safety, data protection, work safety, and environmental regulations, and working hours regulation.

Signature:

Name:

Hemanth Nanjundaiah

Date:

Apply for this job

Benefits



Company car possible



Inhouse Doctor



Meal-Discounts



Coaching



Company Retirement



Barrier-free workplace



Flexitime possible



Home Office possible



Mobile Phone possible



Good public transport



Canteen-Cafeteria



Events for employees



Parking



Near-site Childcare



Health Benefits



Discounts for employees possible



Internet Connection