

Anbarasan Ramalingam

System Requirement Modeling /Development (MBSE) & Validation, 12+ Yrs of Experience



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Competent, well organized individual, strong in communication & leadership, seeking a suitable position where I can reflect my current abilities, develop new skills & simultaneously contribute to the growth of the organization

Professional Summary

- Expertise in **Model Based System Engineering (MBSE)** in **SysML** using **MagicDraw**, **IBM Rhapsody**
- Expertise in **Body Control Module (BCM)** application software functional validation (**SIL/HIL testing**)
- **Having Onsite exposure in FCA (Chrysler) LLC, USA**
- **Design For Six Sigma (DFSS) Green Belt** Certified Professional
- Reviews system engineering documentation to ensure specifications meet system needs and are accurate
- Participates in system reviews & creates/updates requirements specifications & technical documentation
- Established a strategy in SiL Testing to simulate a real time environment in **CANoe** using **CAPL** Scripting
- Hands on experience in **Design, Development** and **Execution of the test cases** for **BCM** component
- Hands on experience in Industry standard **CAN, UDS (Diagnostics)** and **LIN** protocols
- Hands on experience in Requirement analysis & traceability in **IBM DOORS**
- **Review of test plan/test case/report**, monitoring ETA, RCA and ensuring deliverables on time

Skills Sets

- **C/Embedded C , CAPL and SysML, Verification & Validation**
- Matlab (Simulink), Statemate
- **IBM Rational Rhapsody, MagicDraw, DOORS, JIRA, PTC ,Synergy & RQS/KM**
- **CAN, LIN and UDS**
- Vector **CANoe & CANalyzer**

Awards & Accomplishments

- Awarded as “**Certificate of Appreciation**” for setting up virtual analysis framework for MY19_DT, MY19_HDCC and MY19_MP project and identifying software deficiencies early in software life cycle
- Received **Spot award** for extraordinary efforts on developing SBT activities, MBRA activities and SWF release testing items in a short span of time as CTC lead
- Awarded as “**Certificate of Appreciation**” for on time delivery & 100% test results for Yazaki RL78 and V850 series cluster
- **Driver Health Monitoring System** is awarded as one of the **top 2 innovative Star*up Idea** in FCA world
- **Advanced Reverse Park Assist** is selected one of the Innothon Idea in RNTBCI

1. Renault Nissan Technology & Business Centre India, Chennai, India

ADAS - Model Based System Engineering , June 2022 – Present

Design ,Development and Analysis of Vehicle Function Requirements using MagicDraw and DOORS for **ADAS** requirements. **SDD, STR** and **SysML diagrams** are developed using **MagicDraw** and **DOORS**.

- ☐ Utilizes **MBSE tools** and techniques to support requirements development, system design, and the development of use cases in Vehicle and System level
- ☐ **Usecase creation** & traceability for **ADAS** features like ILP, ACC, BSW/LCW, LCA, SALC, Autosteer
- ☐ Writing Vehicle Operational Requirements (VOReq)

2. L&T Technology Services ,Chennai, India

MBSE Specialist, Jan 2022 – June 2022

3. Fiat Chrysler Automobiles (Stellantis), Chennai, India

System Requirement Modeling (MBSE) , September 2020 – Jan 2022

Static (INCOSE standard) and **Dynamic Analysis** of Vehicle function requirements and developing & maintaining System requirement models in **IBM Rhapsody-SysML** environment.

- ☐ Analysis of vehicle function specifications which is done by the **Development of SysML models** in **Rhapsody** & Static analysis using the **RQS/KM tool** suite to update requirement to INCOSE standard
- ☐ Responsible for the design and development of system requirements
- ☐ Requirements Management and traceability using **DOORS**
- ☐ Interaction with suppliers and feature owners for issue clarification and resolution
- ☐ Task allocation, driving daily/weekly meetings and ensuring end to end deliverables

4. Fiat Chrysler Automobiles, Auburn Hills, United States

Software Validation Engineer / Liaison, Oct 2019 – Aug 2020

Represented the offshore team in Chrysler headquarters (USA) for 1 year. In addition to liaison activities, developed software models for BCM core automobile features like Rear Seat Remainder Alert, Drive style and Vehicle Dynamics, Power door locks, Wireless Charging, Hill holder and Multifunction tail gate, Fuel Door release and experienced the testing in actual and buck vehicles and debugging issues at plant.

- ☐ BCM software Test Lead for Dodge Truck, Jeep Wrangler and Jeep Compass vehicles
- ☐ Coordinated with offshore team for development and **SIL** releases
- ☐ Developed **simulation scripts (CAPL)** for entire vehicle network & integration of BCM Model into **CANoe**
- ☐ Maintaining software models of all BCM features for all Vehicles
- ☐ Root cause analysis on the issues reported from various stages of validation

5. Fiat Chrysler Automobiles, Chennai, India

Software Simulation Engineer, March 2016 - September 2019

Maintaining software simulation models of all core vehicle features like Universal Garage Door Opener, Fuel Cutoff, Stoplights, Low brake Fluid management, StopStart Management, Tip Start, Keyless Go in CANoe platform

- ☐ Software Simulation Analyst & Integration Lead for Ram Trucks, Grand Wagoneer and Cherokee vehicles
- ☐ **Test bench setup, Test case development and execution in CANoe environment using CAPL**
- ☐ Responsible for the design, development of all ECU integration for **Virtual Simulation Analysis** in CANoe
- ☐ Debug and perform root cause analysis of the issues reported from field
- ☐ Analyze CAN logs and perform component testing using **CANoe**
- ☐ Conduct and participate in software design review for critical changes
- ☐ Mentoring novice on Virtual Simulation Analysis and development life cycle and tools

6. L&T Technology Services, Bangalore, India

Software Validation Engineer (Cluster) , May 2014 - March 2016

Validated the software models for CLUSTER features like NAVI, USER CMD, GAUGE, DIAG, ALERT, SETTINGS and TELL TALE and experienced the testing in the framework and debugging the issues.

- ☐ Software in loop validation for **Cluster** application and **Diagnostic (UDS)**
- ☐ **Requirement analysis, Test setup preparation, test cases development and test case execution**
- ☐ Issue logging, tracking and closure in SCR portal and perform root cause analysis
- ☐ **Functionality testing, Diagnostic testing and CR's testing**
- ☐ Bug's report generation and log analysis using in **CANoe & Robot Framework (GHOST server)**
- ☐ Debug and perform root cause analysis of the issues reported from the OEM.

7. Prolific Systems & Technologies, Chennai, India

Embedded and Testing Engineer, May 2011 – May 2014

Developed and tested the data logger-based temperature monitoring and control systems

- ☐ Requirements analysis, co-ordination with customer for requirements clarification
- ☐ Analysis log report from data logger and resolve the issues
- ☐ Prepared documentation for logging data and maintenance of software modules

Educational Qualification

- **Bachelor, Engineering (EEE)** - Raja College of Engineering & Technology, Madurai, 2010