

**BALA SABARISH DHANABALAN**  
**FUNCTIONAL SAFETY ENGINEER (SYSTEM & FSM)**



**Experience: 12+ Years**

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**Experience Summary**

- Strong System knowledge in **PT** (Powertrain), **EPS** (Electric Power Steering) and **ABS** (Anti-lock Braking system) architecture.
- Strong knowledge in ISO 26262, IEC 61508, CDL0204, CDQ0303 and CDQ0904 standards
- Prepared Hazard and Risk assessment, Functional safety concept and Technical safety concept for Ford, BMW, GM and Chrysler projects.
- Implemented ISO 26262 \ IEC 61508 in **Ford, BMW, GM and Chrysler projects in UK, Germany and USA.**
- Conducted Safety audits and assessments for Ford and GM
- Rolled out new safety concepts in Ford, BMW, GM and Chrysler projects as per Customer request.
- Conducted trainings on ISO 26262, IEC 61508, CDL0204, CDQ0303 and CDQ0904 standards in UK, Germany and India.
- Led the Process Harmonization activities with respect to Customer processes.
- Strong OEM's interaction on Functional safety issues and driven actions based on customer feedback.
- Leading the Functional safety team in the department and mentoring new team members.
- Prepared Safety cases for all the safety activities carried out in the projects.

## **Trainings/Workshops attended**

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- ISO 26262 certified by Bosch (Training provided by Exida)
- ISO \ TS 16949 : 2009 Certified Internal Auditor
- System Architecture using Enterprise Architect tool and Magic-Draw tool
- FTA using ISOGRAPH Reliability Workbench tool
- FMEA moderator using APIS IQ-tool
- Complaint management system (8D)
- CAR techniques
- 3x5xWhy (Identifying systemic failure)
- Cause Effect diagram.

## **ACADEMIC QUALIFICATION**

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**Bachelor Of Engineering (Electronics & Communication) – 2006 – Anna University, Sri Ramakrishna Institute Of Technology, Coimbatore, India.**

## **Career Profile**

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- Working as **Functional Safety Engineer** with **Segula Technologies** since 11<sup>th</sup> April 2016 to present
- Worked as **Technical Specialist** with **Continental Automotive Components (India) Private Limited** since 13<sup>th</sup> February 2015 to 31<sup>st</sup> March 2016.
- Worked as **Functional Safety Manager** with **Robert Bosch Engineering and Business Solutions Ltd** since 21<sup>st</sup> October 2010 to 26<sup>th</sup> November 2014.
- Worked on Telecommunication domain as SQA Engineer for NSN, IBM..since June 2006 to October 2010.

## **IT Skills**

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Languages	: C, C++
Operating Systems	: Dos, Windows 2000/NT/Xp/CE
Configuration Mgmt	: VSS, Subversion, Clearcase
Defect Tracking Tool	: Bugzilla, ClearQuest
Project Mgmt Tool	: Microsoft Project (MPP)
Requirement Management Tool	: <b>DOORS</b>
FMEA tool	: <b>APIS IQ Tool</b>
FTA tool	: <b>ISOGRAPH Reliability Workbench</b>
Sys-ML Tools	: <b>Magic-Draw</b> and <b>Enterprise Architect</b>

**Experience at Segula Technologies (April 2016 – Present) Location: Ford – Dunton Technical centre, UK**

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SEGULA Technologies is an engineering group with a global presence, helping boost competitiveness within all of the major industrial sectors: automotive, aeronautics, energy, rail, naval, pharmaceutical and petrochemical.

#### **Responsibilities -**

- Implementing **ISO 26262 – 48V Mild-Hybrid / HEV / PHEV vehicles for Ford.**
- Safety engineer for feature LSSG (Low Speed Stop in Gear)
- To prepare and track Hazard and Risk assessment, Functional safety concept and Technical safety concept for **ASIL C.**
- To coordinate with Research team for upcoming vehicle programs (P0 –P4)
- To ensure the functional safety requirements and technical safety requirements are implemented in the Hardware and Software design
- To cascade technical safety requirements to supplier and to ensure met Ford expectations
- To create System and component V&V plan as well as generate report
- To define design validation and sign-off functional safety requirements and technical safety requirements
- To coordinate 48V PCM and 48V BECM team within the organization
- To lead safety validation
- To prepare a safety plan
- To prepare safety case
- To coordinate FMEA and Fault Tree Analysis
- Conducted trainings on ISO 26262 standards within the organization
- Mentoring Functional safety within the department.

#### **Highlights:**

- **Safety Engineer handling both Diesel, Gas hybrids**
- **Created 48V mH model into SysML and improved safety work-product integration**
- **Member representing UK for Ford Safety Board**

**Experience at Continental Automotive Components (India) Private Limited (February 2015 – March 2016) Location : Bangalore, India (April 2015 – June 2015) Location: Frankfurt, Germany**

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Continental Automotive Components (India) Pvt. Ltd is part of Continental AG, one of the world's top five automotive parts suppliers.

#### **Responsibilities -**

- Implemented **ISO 26262 –ABS, RLP and oCB in BMW, Triumph Motorcycle projects at Germany.**
- Implemented **ISO 26262 – ABS, RLP and oCB in TVS and Mahindra Motorcycle projects at India.**
- Implemented **ISO 26262 – ABS eBike German OEM**
- To prepare and track Hazard and Risk assessment, Functional safety concept and Technical safety concept for **MSIL D.**
- To create Safety Architecture
- To conducts Safety trainings
- To prepare a Safety plan

- To prepare Safety cases
- To coordinate FMEA, FMEDA and Fault Tree Analysis
- To analyze the impact with respect to safety for each release.
- Conducted trainings on ISO 26262 standards in Germany and India.
- Leading the Functional safety team in the entire organization and mentoring new team members.

#### **Highlights:**

- **First within organization to implement ISO 26262 for motorcycle**
- Applied for 6 Patents. (1 – Implemented on Autonomous Driving)
- Presented Tech Talk on ISO 26262.

#### **Experience at Robert Bosch Engineering and Business Solutions Pvt. Ltd (October 2010 – 26th November 2014) Location: Coimbatore, India (September 2013 – September 2014) Location: Detroit, USA**

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Robert Bosch Engineering and Business Solutions Limited (RBEI), is a 100% owned subsidiary Of Robert Bosch GmbH, one of the world's leading global supplier of technology and services, Offering end-to-end engineering, IT and Business solutions.

#### **Responsibilities -**

- To prepare and track Hazard and Risk assessment, Functional safety concept and Technical safety concept for **ASIL D**.
- To conducts Safety trainings
- To prepare a Safety plan
- To prepare Safety cases
- To perform SW\HW DFA.
- To coordinate FMEDA
- To prepare S-FMEA
- To prepare FMECA (Criticality Analysis - Technique to identify multi-point failure)
- To prepare FTA
- To prepare a detailed system criticality analysis to identify failure modes, root causes and safety measures and implement those measures in the project.
- To analyze the impact with respect to safety for each release sent to the customer and hence issue a safety report.
- Implemented **IEC 61508/ISO 26262 in GM, Ford and Chrysler projects in USA**.
- Conducted Safety audits and assessments for GM.
- Rolled out new safety concepts in GM projects as per Customer request.
- Conducted trainings on ISO 26262, IEC 61508, CDL0204, CDQ0303 and CDQ0904 standards in USA and India.
- Leading the Functional safety team in the department and mentoring new team members.

#### **Highlights:**

- **First ISO 26262 compliance certified project by Exida**

➤ **Process rollout Member**

- Performed Safety vehicle test at GM proving ground – Milford, MI – USA.
- Won Department Idea Award
- Presented Tech Talk on ISO 26262 \ Network Security.
- Finalist for Techno-quiz.

**PERSONAL DETAILS**

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Father's Name	: R. Dhanabalan
Date of Birth	: 1 <sup>st</sup> February 1985
Nationality	: Indian
Passport	: K 2845983
Visa	: Tier 2 (General) valid until April 2019
Gender	: Male
Marital Status	: Married

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