**ANGEL BHARATHI G**

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**OBJECTIVE:**

To obtain a challenging position in an organisation, where my technical and managerial skills are utilized at the best, to achieve organisational goals and to promote individual growth and self-development along with organisational objectives.

**PROFILE SUMMARY:**

A goal-oriented professional with 7 years of experience in verification and validation of embedded software. Gained exposure to the various stages of SDLC particularly in Low level testing, white box testing, black box testing, Integration Testing, Stress Testing and high-level requirement testing and ADAS Features in Embedded Automotive Domain. Good knowledge in C, A429, AFDX, CAN, UDS, ADA, TCL, CASL scripting. Able test engineer worked in critical situation, good team player, adaptable to work with different clients, colleagues, geographical location and culture.

* Worked in Verification and Validation activities particularly for Airbus Programs (on behalf of EXPLEO as Subcontractor for AIRBUS) – FWS Specification Validation (AIO) and for Rolls Royce Trent 7000 FADEC Airbus NEO program.
* Worked in Resimulation, HIL Testing for AEB systems and Infotainment System Validation, at Renault Nissan Technologies Business center, Chennai (*on behalf of EXPLEO, as Vendor for RNTBCI*).
* Worked in HIL Validation for the following chassis functions in IPG Carmaker: STT, ASRplus, ICB and Easymove, at Stellantis Automotive, France (*On behalf of EXPLEO, as Vendor).*
* Worked in OTA program as Track –1, Auto provisioning test engineer, at DAF Trucks (*on behalf of EXPLEO, as Vendor*).
* Worked as Test automation and Regression test engineer, for Daimler Trucks VECU Projects, at Robert Bosch Engineering and Business Solutions, Coimbatore (*on behalf of HCL Technologies, as Vendor*).
* Currently working as Test Lead engineer for Stellantis Powertrain Module project at KPIT Technologies, Bangalore.

**PROFESSIONAL EXPERIENCE:**

* *Expleo Technologies, Bangalore – Software Engineer from* ***July 2017 – Feb 2022.***
* *HCL Technologies, Coimbatore – Technical Lead from* ***Feb 2022 – Jun 2023.***
* *KPIT Technologies, Bangalore – Test Lead from* ***Jul 2023 – till date.***

**Key Result areas:**

* Handling test deliverables and testing with quality.
* Working as a team and also managed team of 4 members, by delivering quality test deliverable on time.
* Communicating with internal and external client to determine specific requirementsand expectations, managing client expectations as an indicator of quality.

**PROJECTS:**

***Project Name*: Stellantis – Powertrain Module** *[Jul 2023 – till date]*

**Work Location:** KPIT Technologies, Bangalore.

**Team Size: 28**

**Tools used:** MATLAB, DSpace Control Desk, CDA tool, INCA, ALM.

**Project Description:** **Stellantis Projects** aims in performing functional tests for various EVCU’s for HIL Validation. The test document should be prepared by analysing the MATLAB Simulink model, based on the test documents developed, the tests are executed with different Software release.

**Role and Contribution:**

* + Created Control DVPs from Vehicle functions/CFTS for HIL Validation as per the ASPICE and ISO26262 guidelines available
  + Developed and maintained the test environment, including changes to the hardware set up, wire harness and any associated equipment
  + Defined requirements for simulator I/O, instrumentation and automation solutions
  + Captured and reported issues into tracking system for resolution along with test report documentation

***Project Name*: Daimler VCU Projects** *[Feb 2022 – Jun 2023]*

**Work Location:** Robert Bosch Engineering and Business Solutions, Coimbatore.

**Team Size: 5**

**Tools used:** CANALYSER, CANOE, DIVA, Flashcedere, Python Scripting, ECU-Test, Nest-T, UDE, SVN, Rqone.

**Project Description:** **Daimler VECU Projects** aims in performing regression tests and functional tests for various Diagnostics features in the trucks Vehicle ECU via various testing techniques like ADV, PID, Standard Routines and DIVA etc., based on the diagnostics features developed with different Software release.

**Role and Contribution:**

* + Executing the test cases and test scripts in Flashcedere and INCA tool using Python scripts in which different Diagnostic services are checked.
  + Performed Test Execution and test case generation with Canoe DIVA tool.
  + Performing Regression testing for various software release for the VECU.
  + Analyzing and resolving queries and also involved in test cases review (Peer review).
  + Plan and prioritize test cases for automation and involved in preparation of python scripts for test case automation.
  + Defect tracking and reporting is done for every software release.

***Project Name*: Infotainment System Validation** *[Nov 2021 – Feb 2022]*

**Work Location & Client: Renault Nissan Technologies Business Centre India (RNTBCI), Chennai**

**Team Size: 8**

**Tools used:** CANALYSER, JIRA, Infotainment Bench setup.

**Project Description:** **Infotainment System** is the most advanced system which is based on distributed architecture. The goal is to perform functional validation on these audio systems for the features like Bluetooth, SPVR, Android Auto, Car play, USB, IPOD, SXM, AUX, USB and HMI Navigation, Diagnostics and CAN information related features like Temperature, Speed, AC, ADAS features like Ultra parking Assistance, RVC and MVC.

**Role and Contribution:**

* + Utilized vector tools like CANALYSER and CANOE to perform tests and parameters changing. Performed both manual and functional testing.
  + Tested various Media devices, Bluetooth profiles, Navigation systems, VR and SPVR related features with android and apple mobile phones connected to the bench setup.
  + Reported bugs using the bug tracking tool, JIRA and Peer-to-Peer reviewing is done.

***Project Name*: DAF PACCAR OTA project -Connect 2.0** [Jan 2021 – Oct 2021]

**Client: DAF Trucks N.V, Einthoven, Netherlands.**

**Team Size: 12**

**Tools used:** CANAPE, HP-ALM, CASL Scripting, Bosch VMS, DAF Connect Portal.

**Project Description:** **DAF Trucks-Connect 2.0** project aims to select and introduce one global TCU and CSG for all PACCAR trucks. To define and implement a global service for the Over The Air update of vehicle ECU software and also to Replatform current DAF Connect platform and re-engineering current connected services to run on this platform and become globally available.

**Role and Contribution:**

* + Developing Test cases based on the requirement documents for TCU Life Cycle Management in HP ALM.
  + Executing the test cases in CANAPE tool using UDS commands and logging the result in HP ALM tool.
  + Raising the Defect in HP ALM for TCU.
  + Interacting with clients to resolve the defects and technical issues detected during testing.
  + Along with other vendors, performed End to End testing for the TCU embedded in the Vehicle.
  + Technical documentation is prepared for CANAPE tool working, for future usage.
  + Involved in automation of testing part for TCU Life Cycle Management using CASL scripting.
  + Performed Regression and stress testing, for various software updated of the TCU embedded in the Truck.

***Project Name*: PSA CHASSIS VALIDATION – C20 CVAD** [Apr 2020 – Dec 2020]

**Client: Stellantis Automotive, France**

**Team Size: 11**

**Tools used:** DSpace Control Desk, Diagalyser, Canalyser, IPG Carmaker, docinfo, JIRA, TCL Scripting.

**Project Description:** **PSA CHASSIS VALIDATION** project aims at validating different functionalities in ESP and AMVAR ECU’s. The test cases for all the functionalities have been validated and the scripts are also modified based on the updating software then and there.

**Role and Contribution:**

* + Downloading inputs from the DocInfo Tool from the client.
  + Accessing the PSA machines through VPN & Turbo VNC for connecting the IPG Bench.
  + Flashing the Software into the IPG CarMaker using DiagAlyzer.
  + Validating the Test Cases by IPG CarMaker Tool from the Linux Machine for the ESP Functions.
  + Operating the CANalyzer for CAN traces by graphical representation.
  + Validating AMVAR function by dSPACE Control desk.
  + Updating the delivery reports to the client.
  + Gathering ESP functionality scripts from the IPG bench and updating the TCL Language scripts based on new project demand.
  + Fixing all the script issues to make it adapt to all the projects.
  + Updating the Documentation for the modifications done and creating delivery documents required by the client.

***Project Name:* RESIMULATION [**Oct 2018 – Mar 2020**]**

**Work Location: Renault Nissan Technologies Business Center India (RNTBCI), Chennai**

**Client: TCR EXPLEO France, Renault Techno Center Korea.**

**Team size: 5**

**Tools used:** VD Streamer, Citrix Application, Tortoise SVN.

**Project Description: Autonomous emergency braking system** is a part of ADAS advanced active safety system. The signals from the camera and radar are collected from the CAN and then analyzed to determine which type of braking (AEBs) has to be performed on the host vehicle. Worked on different vehicle type like BJA, HJB, LJL and JFCph2.

**Role and Contribution:**

* + Developing Level 1 and Level 2 Analysis for both raw data and Simulation data.
  + Analyzing the signals that are generated from CAN\_ITS in the tool to prepare analysis report.
  + Review of reports developed by peer engineers
  + Prepared technical documents regarding resimulation project and involved in technical discussions with the client regarding the problems identified by the team.

***Project Name:* RR T7000 EEC- Software verification (LLT and HLRT) [**Feb 2018 – Sep 2018**]**

**Work Location: EXPLEO Technologies India Private Limited**

**Client: Rolls Royce (UK)**

**Team size: 20**

**Tools used:** CUTE (Component Under Test Explorer)

**Language used:** Ada

**Project Description: Engine Electronic Controller** is a part of FADEC which monitors and controls all the operating parameters of the engine by receiving data from various parts of the engine. Worked on the software verification of Operating software layer of the EEC: Common Core Operating Software (CCOS), Application Software (AS), and Interactive Maintenance (IM) Tested interactive maintenance module for both LLT and HLRT

**Role and Contribution:**

* Developing Test Scripts with DO-178B - Module level and High level testing. Written test cases by using white box testing and black box testing techniques, based on the requirement.
* Executing the tests and analyse the coverage and OCC.
* Involved in technical discussions with the client regarding Problem reports identified by the team.

***Project Name*: Verification of flight warning system (FWS) using OCASIME simulator** – for IMA (A380, A350 & A400M) family of Airbus aircraft [Jul 2017 - Jan 2018]

**Work Location: Airbus Engineering Center India Pvt Ltd, Bangalore**

**Client: Airbus France (AFR)**

**Team Size: 7**

**Tools used:** OCASIME (desktop simulator)

**Project Description:**

Verification and validation of Flight Warning System (FWS) development standard for A350,A380 & A400M. The FWS is a sub-system of the Indicating & Recording System (ATA 31). The FWS is a centralized avionics system dedicated to continuous monitoring of aircraft system and recovery procedure in case of failure. Model testing is performed in the desktop simulation environment called OCASIME, for the validation of the SCADE design of Flight warning system.

**Role and Contribution:**

• Verifying the implementation of SCADE logics with respect to the description in the System interface document.

• Working in conjunction with Airbus Design Office for reporting any logic implementation’s error

• Developing test procedures as per the requirements specified in the System Interface Document (SID).

• Execution of test procedures using OCASIME simulator.

• Review of artefacts developed by peer engineers.

**EDUCATION**:

* B.Tech in Information Technology, from Jeppiaar SRR Engineering College (Affiliated to Anna University), Chennai in 2016 with **82.7%**.
* Post Graduate Diploma in Management from Loyola Institute of Business Administration (LIBA), Chennai from 2018 – 2021 with **62%**.
* HSC with **83.4%** from Christ The King Matriculation Higher Secondary School, Kumbakonam.
* Matriculation with **95.5%** from Christ The King Matriculation Higher Secondary School, Kumbakonam.

**PERSONAL DETAILS**:

Name : Angel Bharathi George

Age : 28

D.O.B : 16-05-1995

Gender : Female

Nationality : Indian

Hobbies : Reading Novels, Cooking, Listening Songs.

**Languages known:**

English, Tamil, Hindi (READ AND WRITE)

**DECLARATION:**

I hereby declare that furnished above details are true to best of my knowledge and I will fulfil your requirements by my smart work.

Place: Kumbakonam

Date: Yours sincerely,

(G. ANGEL BHARATHI)