KALPANA BODDU

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Seeking Development assignments in Embedded Technologies with a growth oriented organisation.

CAREER OVERVIEW

BD10290_

* Having 8years of experience in embedded software development and testing in automotive domain.
* Good Knowledge in Embedded C.
* Good understanding of unit testing, functional and integration testing concepts and HIL Testing through Lab Car and INCA.
* Experience in usage of communication protocol on CAN and LIN.
* Good Knowledge in Modelling, Simulation and Auto code generation using ASCET.
* Experience in using software configuration management tools like Rational Clear Case,

Clear Quest, Sea pine.

* Followed ASPICE standards for quality and reliable software.
* Managing and handling of the requirements and delivering the SW to customers.
* Good exposure to all stages of Software Development Life Cycle and Testing Methodologies
* Knowledge in RTOS concepts.
* Good Knowledge in interfacing microcontroller with peripherals like ADC, SPI, I2C and RS232
* Expertise in Code Analysis and Static Testing Using the Tool POLYSPACE.
* Involved in Analysis of Runtime Errors and fixing them.
* Experience in checking the code to MISRA C compliance and good at using QAC tool and resolving QAC warnings.
* Excellent communication and interpersonal skills.
* Quick learner & self-directed consistently updating self with the emerging trends in the industry.

Technical Expertise

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| --- | --- |
| Technical skills | Embedded C, C++ and CAPL scripts |
| Testing Tools | VT system, POLYSPACE, ASCET, INCA, Canoe, UDE, ES1000, VAS, tester, Open Loop Lab Car, MEVIS, C Checker, SW Analyzer, Oscilloscope. |
| Microcontrollers | Infineon TC1796, TC1797, STM32f479I |
| SCM Tools | ClearCase, ClearQuest, SDOM. |
| RTOS | ERCOS |
| Domain Experience | Automotive and Embedded. |
| Education | Bachelor of technology in electronics and communication in JNTU University. |

Experience summary

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| --- | --- | --- | --- |
| Job Duration | Company | Job Location | Job Role |
| May 2008 – May 2012 | Robert Bosch India Pvt ltd | Coimbatore, India | Senior software Engineer |
| Dec 2012 – Sep 2016 | Tata Consultancy Services(TCS) | Bangalore, India | IT Analyst |
| June 2019 – till date | Osler Diagnostics | Oxford, UK | Embedded Software Engineer |

Project Details:

*1.*

Title : Implementation for Emstat PICO

Company : Osler Diagnostics

Duration : 8 June 2019 – till date

Role : Embedded Software Engineer

Team Size : 4

Project Nature : Development

Description*:*

The EmStat Pico module is a dual-channel embedded potentiostat which can be used for electrochemical measurements. The EmStat Pico module measures various electrochemical techniques like Cyclic Voltammetry, Square Wave Voltammetry and Impedance Spectroscopy (EIS).

Role and Responsibility:

* Involved in software development for detecting the Emstat pico device.
* Measured various electrochemical techniques like CV, DPV, EIS and so on.
* Testing the measurements through dummy cell*.*

*2.*

Title : Mirror Adjustment Systems

Client : TRW Automotive Electronics, Winona

Duration : Jan 2016 – Sept 2016

Role : IT Analyst

Tools used : VT system, Vflash, Canoe

Team Size : 5

Project Nature : System Testing

*Description:*

Verification and Validation of Mirror Adjustment Systems.

*Role and Responsibility:*

* Involved in system testing of Driver mirror control Module (DMCM) and Passenger Mirror Control Module (PMCM).
* Involved in effort estimation plan for writing the test cases and implementing them.
* Analyzed the requirements from SYRS document and developed the test cases, test procedures and test reports.
* Involved in grouping the system requirements into single test case.
* Involved in Manual testing and automation testing using CAPL scripts for the test cases.
* Validation of DMCM and PMCM LIN interface messages between BCM and ECUs.
* Used IBM DOORs, for storing the Test scripts and Test reports.

*3.*

Title : HVAC Control Panel Module

Client : TRW Automotive Electronics, Winona

Duration : Jun 2015 – Jan 2016

Role : IT Analyst

Tools used : VT system, Vflash, Canoe

Team Size : 5

Project Nature : System Testing

*Description*:

Verification and Validation of HVAC systems.

*Role and Responsibility:*

* Tested the 11 button status of HVAC system and (Clockwise/anticlockwise ) movement of the rock button.
* Involved in effort estimation plan for writing the test cases and implementing them.
* Analyzed the requirements from SYRS document and developed the test cases, test procedures and test reports.
* Involved in grouping the system requirements into single test case.
* Involved in Manual testing and automation testing using CAPL scripts for the test cases.
* Used IBM DOORs, for storing the Test scripts and Test reports.

*4.*

Title : Steering Column Switching System

Client : TRW Automotive Electronics, Winnona

Duration : Dec 2012 – Jun 2015

Role : IT Analyst

Tools used : POLYSPACE

Team Size : 4

*Description:*

Verification and Static Code Analysis of Steering Column Switching System Module.

*Role and Responsibility:*

* Involved in Polyspace Verification.
* Run Build for different project code SW.
* Debugged project code and fixed the run time errors.
* Run build for the modified project code software.
* Involved in static analysis of the errors and prepared the analysis sheet and reported bugs to the customer in TestTrack tool.
* Generated the synthesis sheet and HTML reports for the project SW.
* Prepared the Polyspace Metric sheet and estimations to analyse the errors for the all the project modules.
* Delivered the analysis and Summary documents to the customer and placed in surround.

*5.*

Title : CAN frames Implementation for Inverter ECU Development & Testing for Hybrid Cars

Client : Volkswagen, Audi, PSA, Porsche

Duration : Jan 2011 - May 2012

Role : Senior Software Engineer

Tools used : ASCET, CChecker, Software Analyzer, INCA, Canalyzer, VAS Tester, Open Loop Lab Car

Team Size : 4

*Description:*

The project involves Implementation of the transmit and receive CAN signals of the inverter ECU node for different customers.

*Role and Responsibility:*

* Involved in Requirement Analysis, identifying the required modules to be modified and gathering the new signals to be implemented.
* Performed requirement review (Kickoff Meeting) with the customer.
* Follows all phases of RDCT (Requirement, Design, Code and Testing) of development life cycle.
* Implementation and modification of signals and performing unit tests for the CAN frames.
* Implemented Bus off handling for CAN bus.
* Performed many code reviews for different modules and actively played Review leader role.
* Analyzing code generation and Misra warnings for the developed modules.
* Integration of the Implemented modules to the platform/customer projects.
* Performed Pre delivery check
* Delivered the deliverables along with the support files required by application engineers
* Involved in peer Reviews of Work products.

*6.*

Title : Integration of Electrical system modules for Passenger Cars

Client : Volkswagen, Audi

Duration : Dec 2010 - Jan 2011

Role : Senior Software Engineer

Tools used : INCA, Canalyzer ,VAS Tester, Lab Car

Team Size : 5

*Description:*

The Passenger Car Electrical system consists of Battery, Starter, Alternator. The battery provides necessary voltage to the starter. The alternator gives the battery the energy it needs to power the car. The project is to Integrate these software modules functional changes to the platform/customer branch.

*Role and Responsibility:*

* Involved in Requirement Analysis of collecting the required functional changes of Battery, Starter and Alternator modules to platform/customer branch.
* Performed Requirement review (Kickoff Meeting) with the customer.
* Involved in Peer Reviews of Work products.
* Tested the new and interface messages, CAN Signals, Sensor Messages and involved in adding the os tasks to the scheduler.
* Performed Pre delivery checks.
* Delivered the deliverables along with the support files required by application engineers.

*7.*

Title : Implementation of OBD Signals for Passenger Cars

Client : Volkswagen, Audi

Duration : Jul 2009 - Nov 2010

Role : Senior Software Engineer

Tools used : INCA, Canalyzer ,VAS Tester, Lab Car

Team Size : 5

*Description:*

Implementation of the Mode 1 diagnostic service(ISO15031) OBD signals and reading the values of signals to the tester. Configuration of Parameter Identifiers(PIds) interfaces to different projects.

*Role and Responsibility:*

* Involved in Requirement Analysis
* Performed Requirement review (Kickoff Meeting) with the customer.
* Followed all the phases of RDCT (Requirement, Design, Code and Testing) of development life cycle.
* Involved in Peer Reviews of Work products.
* Implementation and modification of Mode1 OBD signals and performing unit tests for the signals configured.
* Performed Pre delivery checks.
* Delivered the deliverables along with the support files required by application engineers.

*8.*

Title : Bypass hooks Configuration and Testing

Client : Volkswagen, Audi

Duration : May 2008 to Jun 2009

Role : Software Engineer

Tools used : ASCET, INCA, ES1000, UDE Debugger, Open Loop Lab Car.

Team Size : 3

*Description:*

Configuring bypass hooks to the required project and testing the functionality. The bypass hooks are configured to a part of functionality, to make any minor changes and check the behaviour of the whole system without modifying the complete functionality.

*Role and Responsibility:*

* Configuration of bypass hooks for different projects.
* Testing the flow of data between the interfaces of the modules.
* Integration of the packages to the platform/customer projects.
* Tested the new and interface messages, CAN Signals, Sensor Messages and involved in adding the os tasks to the scheduler.
* Performed Functional and Integration Testing.
* Performed Pre Delivery Check.
* Delivered the deliverables along with the support files to project calibration team.