Neeraja

**Professional Summary**

* Over 6+ years of experience in real time embedded system for developing embedded software in consumer electronics and Agricultural Industry andautomotive industry.
* Worked in all phases of software development life cycle.
* Experience in embedded **C**, **C++**, **Data structures** and proprietary RTOS.
* Proficiency in debugging in Embedded Firmware applications.
* Experience with Design patterns and **OOAD** concepts using object oriented language.
* Expertise in Embedded platform systems software design and development using ARM/NEC RISC controllers.
* Strong experience with vector tools, **Diagnostic tools**, Flash tools and EOL in Automotive domain.
* Basic understanding on Software Configuration management.
* Good Experience with HTML.
* Hands on experience with Rhapsody, **Matlab**/**Simulink**.
* Proficient in testing methodologies like Functional/Non-functional, Integration, Regression, Sanity, System, and User Acceptance Testing, etc. & involved in UAT, Drive Test
* Experience in Debugging using **Green Hills Multi**, UDE, Trace 32,JTAG,CAN, and GDB.
* Good experience in testing of unit/functional testing, verification and validation.
* Experience in Communication protocols like **CAN**,**J1939**,**KWP2000**,**LIN**,UDS,SPI,TCP/IP and USB.
* Writing test scripts using**PYTHON**,**CAPL** and test plan for the product performance check.
* Component level testing and debugging of various platforms circuit boards and cross-functional experience in embedded systems development with further its production and customer support.
* Experience of working under an **Agile/Scrum** methodology in self-organized teams.

**Professional Summary**

Bachelors in Computer Science Information Technology. (JNTU Hyderabad) May 2009

**Professional Summary**

* Programming languages : C, C++, Embedded C, OOPS
* CAN Vector tools: CAnalyzer, Canoe, J1939.
* Compilers: Microsoft visual studio, eclipse and gcc.
* Microcontrollers: ARM, Tricore, Power PC
* Debuggers: Green hills [MULTI], UDE.
* Real time platforms : UNIX, LINUX , QNX, Windows, VXWorks
* Version Controllers: Visual studio (shell), SVN, Perforce, Clear case.
* Analog layout tools : Cadence virtuoso, PsPice and Simulink(matlab)
* Tools: Beyond Compare, Slick edit, Doxygen.
* Scripting languages: CAPL, PYTHON.
* Communication Protocols: CAN,TCP/IP, Wireshark, RS- 232, RS -486

**Professional Summary**

**1. Dash Board Implementation**

**Company:** Presagis–Orlando, FL

**Environment:** C,C++, UML, SVN, CAN, NEC Controller, LINUX, NEC IDE, CAPL, CANOE, Flashing Device,

Function Generator etc.

**Duration:** Jan 2015 to Till Date

**Project Description:**

The scope of the project is to develop different features implemented in a cluster for a leading Tier-1 Automotive company, The project consists of seven modules Fuel Gauges, EEPROM, LCD, Telltales, Chimes, Backlighting, Odometer. The functionality of the backlighting module is to produce backlight for scales, pointers and LCD. Due to limitations in the input requirements from our customer, the module’s feature is restricted to give constant backlighting. The PWM pulse is generated with fixed frequency and duty factor from the controller timer output pins as per the specification. Any change in the duty factor leads to the variation in the intensity of backlighting for Scales, Pointers and LCD.

**Roles and Responsibilities**

* Understanding the requirement for Odometer, temperature Gauge, Fuel Gauge and speedo meter
* Implemented the logic for Odometer, Fuel gauge and speedo meter
* Implemented firmware for ARM Board
* Unit testing and tested the code for range of values
* Simulated the functionality testing using CAN Analyzer, Canoe
* Bug fixing, verification and validation of the implemented modules
* Direct interaction with customer issues

**2. CAR infotainment system**

**Company:** Pixida USA Inc, NY

**Environment:** C/C++, programming**,** CAN, Python, VSS, MATLAB/Simulink, CAN Analyzer, ARM9, Canoe, DOOR, IBM Clear Quest, QNX, and QNX Momentics

**Duration:**Nov 2013 -Dec 2014

**Project Description:**

The aim of this project is to save the car radio from unauthorized use. When the user switches ON the car radio then it will first request the user to enter the security code and after the user enters the security code then the code is validated against the hardcode value stored in the protected EEPROM if the code is correct then the radio works normally otherwise it will be locked

**Roles and Responsibilities**

* Design and development interface between EEPROM and car module
* Designing and performing timing analysis for CAN networks.
* Manage timing requirements, configurations and releases of an autosar system.
* Using co-simulation with matlab Simulink at the virtual platform level that scales to target hardware.
* Validating the security of the car radio using CAN Analyzer message
* Review and track all the tasks allocation details and progress.
* Track and report upon testing activities, including testing results, test case coverage, required resources, defects logged and their status, etc.
* Setting up the Test bed for Execution and Bug Regression.
* Help the test team in clarifying issues in the product.
* Testing the security code using car radio ECU using the CAN message
* Functional Level testing
* Documentation of the test cases and validation
* Bug fixing

**3. Tire Pressure Monitoring System Highline & Baseline ECU Testing.**

**Company:** Eurotech, India

**Environment:** CAN**,** RS232, CANCaseXL Log/CANCaseXL ,Canoe, Clear Case

**Period:** Sep 2011 -Oct 2013

**Project Description:**

The TPMS system will be used to monitor the various parameters of tire. The sensors in the tire sense the tire parameters and these parameters will be transmitted to the ECU by RF message. ECU communicates with CAN and CLASS 2 protocol

**Roles and Responsibilities**

* Software validation.
* Developing Test procedures
* Execution of test cases
* Verification and validation of the various documents
* Defect reporting using Bugzilla.
* Ensured there are zero test escapes and defect slippages from the tests executed.
* No instances of rejection/slippage of delivered work items. Rework was attributable to only customer requested changes and project requirement changes.

**4. Infotainment system**

**Company:** Pricol, India

**Environment:** C++, XML, Synergy, IECube Debugger, Fujitsu 340 series, VxWorks

**Duration:** Sep2010-Aug 2011

**Project Description:**

The Dashboard implementation device is used in car to provide information for the user with Navigation, Media, Audio, Configuration, and Tuner. Involved in implementation of logic for Climate Control GUI, Date Time Information GUI, Alerting and confirmation GUI. Components of the GUI consist of the xml components and each components behavior is coded using C++. The User action on these widgets needs to be transformed to the certain sets of action, which involved requesting the hardware components to perform certain set of action via DBus application.

**Roles and Responsibilities**

* Requirement Analysis, Coding, Debugging, Testing and Documentation
* Climate Control logic for the XML component and Date, time, edit box, Alerting and confirmation Dialog box logic
* Synergy used for the Progressive code development
* Setting up the Test bed for Execution and Bug Regression.
* Help the test team in clarifying issues in the product.
* Core member of the Architecture team for doing POC’s projects.
* Designed and developed Climate Control, Navigation System, Bluetooth and Acceptance test cases based on the SRS/SRD and UI documents and modified/updated the iPod test cases base on change in the latest baseline.

**5. Modular Test System**

**Company:** Acculogix Software Solutions, India

**Environment:** Atmega 128, AT325, T6963C, VXWorks, JTAG, Perforce, WinAVR GCC, AVR studio, CRO, C,

Assembly

**Period:** July 2009**-**Aug 2010

**Project Description:**

Modular Test System is a one-stop solution for laser diode characterization and device testing. The user can incorporate two to four modules in one mainframe unit resulting in cost reduction, space and improved performance. Here single firmware version developed to compatible with any combination of modules.

**Roles and Responsibilities**

* Involved in design discussions and implementation for Modular design of main frame & modules
* Keypad interface and knob for numeric & functional control
* SPI Communication between main frame and modules (Communication between two controller)
* Firmware for the Graphical LCD Display ( T6963C Microcontroller, Graphical LCD240x128 pixels)
* 16 bit ADC and DAC
* RS232 (3-wire)