**Chandu**

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Objective:

Over **4**.3 yearsof extensive experience in embedded programming with proficiency in C, C++ andgood understanding of real-time systems. Looking for a position in an organization involved in design, development and testing of embedded systems software and hardware.

* Experience in 8/16/32 bit Microcontrollers architecture and its memory map.
* Experience in ARM 7TDMI-S (LPC 214x and 2138), Cortex M0, M1, M3, R4, ATMEGA serieswith thorough architecture understanding.
* Experience in Requirement Analysis, Development, Design, System Integration, Configuration Management, Bug Fixing and Maintenance (SDLC).
* Expertise in EMBEDDED “C“, C++ and Assembly language" programming.
* Work experience with RS-232, RS-485, and UART Serial communications.
* Work experience with CAN, I2C, SPI, LIN communication protocols.
* Experience in **CAN** Boot loader. Firmware Up-grader.
* Hands on experience in Rowley Cross works, KeilµV, AVR Studio,Code blocks, IAR work bench, BCC Compilers.**, GHS Multi, CANoe and JTAG Debugger, SW debugger.**
* **I**ntegrating Hip Chat with Jira, confluence etc.
* Experience in different engineering domains such asAutomotive, Automation, control systems.
* Experience in Project Management Activities such as Estimation, Planning
* Experience in different software life cycles in SDLC
* Good knowledge in ISO 26262 – ASIL Safety standards for Automotive software
* Hands on experience in unit testing, system testing and integration testing using manual and automated testing.
* Good experience in RTOS porting and experience in OSEK 3.0.3 and QNX, , µC/OS-II, On Time RTOSFree RTOS
* Experience in Design tools like **UML**

TECHNICAL SKILLS

Programming languages: Embedded C, C++ and Assembly languages, Python

RTOS: OSEK 3.0.3 and QNX, µC/OS-II, On Time RTOS, Free RTOS

Protocols: CAN, LIN, I2C, SPI, RS232, RS485, UART, Customized protocols.

Microcontrollers: ARM 7TDMI-S (LPC 214x and 2138), Cortex M0, M1, M3, R4, ATMEGA series, Toshiba proprietary microcontrollers (TMPM369, Capricorn series)

Coding Standard: MISRA C

Software standards: OSEK 3.0 and ISO26262

Development and testing tool: CANoe and JTAG Debugger, Keil µV, AVR Studio, Code blocks, IAR work Bench, debugger

Configuration Management: CVS, Tortoise SVN

Code Editors: Source Insight, Eclipse and Notepad++

Testing tools: Tessie tool, CANoe, QAC, and LINT.

Design Tool: Enterprise Architect tool

Defect Tracking: Bugzilla.

Project Experience

Project # 01

Name : Open Vehicle Infotainment Platform

Role : Embedded Engineer

Team size : 8 members

Tools : OOAD, QNX, C++, QT, QML, STL, DBUS, SVN & IBM CM Senergy, gdb, Val grind, Code Site

Client : Bertrandt US – Greenville, SC

Duration :**Nov**-**2015 to Till**

OVIP(Open Vehicle Infotainment Platform) is the Automotive Infotainment domain project. It is an infotainment system for consumer vehicle. IVI(In Vehicle Infotainment) is a collection of hardware devices installed into automobile or other forms of transportation, to provide audio/visual entertainment as well as automotive navigation systems. Project activities are mainly divided as Human Machine Interface (HMI), BL, and SSW. HMI of an infotainment system is the interface, through which the user communicates with the infotainment system.

Open Infotainment Platform(OIP) is a standards-based, low-power, scalable, and highly flexible platform that enables rapid development and simplified upgrades.

Responsibilities:

* Coding business logic using C++ according to continental standards.
* Supporting team members in writing code as per the state diagram given by client.
* Working on Agile methodology.
* Involving in preparing High level and Low level detail design using IBM Rhapsody.
* Reviewing the code developed by team.
* Adapted open-source wireless network driver to new Linux-based platform for prototype application.
* Developed net-boot procedure for Linux-based platform.
* Suggesting team on how to write unit test for ~100% code coverage.
* Creating and managing JIRA projects, workflows, permissions, users, etc.
* Integration experience on JIRA with Confluence with plug-ins and development.
* Improves quality of software by reducing static foot print.
* Helping team in a great extent to understand and debug crashes and code walkthrough.
* Test plan preparation
* Test execution
* User Manual, Traceability Matrix, FMEA etc.
* Client orientation/support/maintenance/enhancement.
* Velocity scripting for the AUTOSAR configuration and code generation tool.

Project # 02

Name :TMPR46x (Capricorn-Btx/Cx) Factory Test Software

Role : **Embedded** Developer

Environment : TMPR46x (Capricorn-Btx/Cx) – Toshiba proprietary controller

Team Size : 12

Client : Toshiba – Irvine, CA

Duration : **Feb-2015 to Oct-2015**

Basic Jikki-Board requirements for Capricorn-Btx/C. It should allow the testing and measurement of relevant features of Capricorn-Btx/C in mass production. The software is developed to test all the features of the Capricorn- Btx/C controller.

Responsibilities:

* Handling complete requirements for all different features.
* Enhancement of new requirements and new designs.
* Handling all technical quires and discussions with the client for all the projects.
* Building team capabilities to handle different tasks from client.
* Handling complete software life cycle.
* Analyze the requirements and Estimate Efforts, Prepare Schedule and Identifying Risks.
* Work delegation to team members based on their experience and capabilities.
* Involve in technical reviews & Verify code according to coding standards.
* Perform Software Integration testing using Debuggers.
* Interacting with client
* Software deliveries and planning

Maintenance/Enhancement of the following tasks:

* LPDDR/SRAM/TCM RAM memory test with March BDN algorithm.
* Oscillator 32Khz measurement validation with software.
* Spread spectrum clock generation characterization through software.
* IO interface and IO memory map validation through software.
* External Memory like QSPI flash, NAND, NOR interface/Memory map validation.
* Watchdog Driver protection.

Project # 03

Name : Optical-Electrical Transceivers and sub-components

Role : Embedded Engineer

Team size : 9 members

Tools :C, C++, Boost library, SQL/PL-SQL. Visual Studio.NET 2008

Client : **Mindtree Technologies, India**

Duration :**Sept-2013 to July-2014**

Develop software for testing of high speed Fiber optic data communication transceiver Device firmware. Develop and Implement device drivers for custom test boards and test equipment’s. R&D project coordination and support new products like 10GHz and 40GHz using parallel 1Gig modules. Develop the Parallel test Platform (Par test) to test the GBICs, SFP, SFP+, XFP devices.

Responsibilities:

* Develop high speed device drivers to cater Optical to Electrical signal conversion and vice versa in fiber optic transceivers. Avalanche Photo Laser Diode control Driver Development and Testing.
* Design and develop test software for testing transceiver modules; this includes creating test algorithms, test classes, test scripts, instrument driver, perform Development, Testing and Documentation of test methodologies on VB .Net
* Develop and implement device drivers for custom test boards and test equipment used in production for testing optical transceivers and optical sub-components
* Participate in new board design and development of test software and new equipment set-up
* Perform verification on drivers and hardware functionality
* Work closely with Product Engineering team, Firmware and NPI group to transfer the design to Offshore manufacturing facilities
* Client orientation/support/maintenance/enhancement.
* Velocity scripting for the AUTOSAR configuration and code generation tool.

Project # 04

Name : Digital Controller for Speed and Torque

Role : Embedded Engineer (Intern)

Tools :C, C++, Boost library

Client : **Mindtree Technologies, India**

Duration :**May**-**2012 to Aug-2013**

This is one of the basic instruments required for testing the engine with thehelp of an Eddy Current Dynamometer. By loading the dynamometer electrically and controlling engine throttle through throttle controller, the control achieved is very fine and reliable at different load and speed of the Engine (Torque/Speed characteristic of engine). The operating conditions of the engine and the dynamometer brake are characterized by speed and torque. The operation of the test bench is more stable if the brake is more powerful than the engine above the selected speed. For every position of the control on the engine (throttle) and on the dynamometer, there must be a defined torque speed curve. The characteristic points of engine curve must fall within the characteristic curve of Dynamometer

Responsibilities:

* Hardware design, review, debugging and fault finding
* Software development
* Design document and Test plans
* Unit testing of modules
* Functionality testing
* Integration testing
* System functionality testing and validation
* Customer and production department tech support