Personal Information

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Gender: Male
Date of birth: 28.02.1991
Nationality: Indian

Work Experience

2 years 10 months

Employer: Volansys Technologies Pvt. Ltd, Ahmedabad (India)
Position: Embedded Software Engineer
Duration: October 2014 - July 2015
Responsibilities:

- Porting of Linux based file-system, application, device drivers and board support package on ARMv7 based development board.
- Bug fixing and debugging of GPU device driver.
- Porting of U-boot and Linux kernel on am335x based Beagle Bone Black board.
- Providing relevant Linux programming training to junior team members.

Employer: Einfochips Pvt. Ltd, Ahmedabad (India)
Position: Embedded Software Engineer
Duration: January 2014 - October 2014
Responsibilities:

- Evaluation of Texas Instrument system on chip based development board peripherals.
- Development of Linux TCP/IP Socket based application.

Employer: Matrix Comsec Pvt. Ltd, Vadodara (India)
Position: Software Developer
Duration: August 2012 - January 2014
Responsibilities:

- To design and develop Embedded system software for GSM Gateways & IP-PBX telecom products.
- Worked with 8051 based micro-controllers, DSP and ARM based platforms which involves board bring up, porting, product feature development, testing, software module integration and debugging.
- Responding to customer questions via email.

Education

Dharmsinh Desai University, Nadiad (India)
Duration: July 2008 - May 2012
Title of Qualification Awarded: Bachelor of Engineering in Electronics and Communication
G.P.A.: 3.3 (Maximum being 4)

Professional skills

Organizational skills:

- Analytical Skills : Developed during my employment when I was responsible for product feature feasibility.
- Teamwork and Task Estimation : Skills acquired at University by doing curriculum projects in small teams.

Technical Skills

- **Programming Languages** : C (MISRA C Guidelines), C++, Embedded C
- **Scripting Languages** : Python, Linux Bash Shell, Selenium Webdriver
- **Operating Systems** : Windows, Linux (Ubuntu, Fedora)
- **Database** : SQL
- **Version Control Systems** : svn, git, cvs
- **Linux Programming** : Multithreading, IPC, TCP/IP Socket Programming, Device Drivers, Makefile
- **Bus Protocols** : I2C, SPI, CAN, UART, USB
- **Network Protocols** : TCP, HTTP, FTP, SMB, UDP, Syslog
- **Processor/Microcontroller Architectures** : x86, ARM, 8051
- **Software Tools** : Understand 2.0, Eclipse CDT, Keil µVision 4, Code Blocks, Microsoft Visual Studio 2008, Code Composer Studio, Doxygen, GCC compiler, vim, MATLAB, QT Creator
- **Debugging Tools** : gdb, Kiwi Syslog

Other skills

- Swimming : Active member of sports club
- Chess, Cricket and Puzzle solving : Practiced as an independent

Languages

- English (Fluent)
- Hindi (National Language)
- Gujarati (Mother tongue)

Online Courses

- Learn to Program : offered by www.coursera.org
- Introduction to Linux : offered by www.edx.org
- Embedded Systems : offered by www.edx.org

Projects

Title Embedded SMS Server

Description A customer had requested a feature in the Matrix IP-PBX product to convert the SMS to Email and Email to SMS. The project involved adding the required features by following SMTP and POP3 protocols.

Key Technologies Linux, C, Makefile, Inter Process Communication, Multithreading

Responsibilities

- Development of SMS PDU Encoding & Decoding module by following GSM 3.40 standard.
- Development of "SMS Sender" module which would send SMS(s) via multiple GSM ports of Matrix IP-PBX products.
- Development of "SMS Receiver" module which would receive SMS(s) via multiple GSM ports of Matrix IP-PBX products.
- Development of algorithm that handles multi part SMS in SMS Receiver module by using linked list data structure.
- Development of Timer module by using linked list data structure.
- Development of Syslog module for Debugging.
- Configuration & porting of Busybox utility.
- Development of bash shell scripts and Makefiles to cross compile software modules.
- Added support of UTF-8 characters by using libiconv open source library.
- Software Design & QA release documentation.

Title Board Support Package & Dual Display Porting on ARMv7 based development board

Description A customer wanted to build a complete dual display package on ARMv7 based board for thin client application. It also involves porting of customized ubuntu file system. In that file system we have supported different applications like firefox, totem media player, document viewer and gstreamer media framework.

Key Technologies Linux, C, Board Support Package

Responsibilities
- Porting of Ubuntu 12.04 file system on ARMv7 based board.
- Implementation of hot plug HDMI event by using udev rules.
- Porting of firefox by using scratchbox2 toolkit.
- Bug fixing in GPU driver.
- Board Support Package porting on ARMv7 based board.
- Setup of git server on a ubuntu server.

Title Computer Telephony Integration

Description The Computer Telephony Integration involves the development of TSP (Telephony service provider) driver for Matrix IP-PBX products. It also involved GUI development for Windows based soft phone.

Key Technologies Windows, C++

Responsibilities
- Development of TCP & UDP socket client application.
- Development of Serial port communication module.
- Development of "Windows Registry" module which would add/modify the configuration of any software installed in the windows system.

Title Texas Instruments EVM

Description This project involved maintenance of board support packages for TI6630K2L & TI66AK2E system on chips. It also involved evaluation of the peripherals of evaluation board.

Key Technologies Linux, C, Board Support Package

Responsibilities
- Development of SPI device driver to verify the expander interface of the board.
- Upgrading FPGA chip through System on Chip to make SPI line operate properly.
- Development of software utility that can verify all the peripheral modules.

Title GSM Engine Support

Description This project involved evaluation of various GSM engines and adding support of respective GSM modules to Matrix IP-PBX & GSM Gateway products.

Key Technologies Windows, C

Responsibilities
- Evaluation of GSM engines of different vendors like Quectel, SIMCOM & Sierra Wireless.
- Modification of existing GSM library code to support tested GSM engines.