SHRUTI VASANTRAO KULKARNI

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## CAREER OBJECTIVE

To pursue a professional career in an organization wherein I can constantly grow within the company, acquire specific skills at each level and give my best efforts to work for overall stability and prosperity of the company.

## SUMMARY:

* Experience of 6.5 years in **embedded domain** as a software developer.
* Proficient in C language, Data Structures, OS-RTOS Concepts, OS-RTOS Porting, Multithreading, IPC, Socket Programming, BACnet Protocol, Debugging, Root Cause Analysis and Bug Fixing.
* Involved in Requirement Analysis, Design, Development, Testing and Maintenance

## PROFESSIONAL SKILLS:

* Programming Languages: C, C++, Assembly for 8051 and Matlab.
* Operating Systems: Windows and Linux.
* RTOS: FreeRTOS and WinCE.
* Protocols: BACnet, UART, SPI and I2C.
* Microcontrollers: 8051
* Tools: Visual Studio, Eclipse, GCC, QTCreator, GDB, Keil, VTS (Visual Test Shell), WireShark, SVN, CVS, Bugzilla.
* Familiar with Networking Concepts.

Soft Skills: Interpersonal Effectiveness, Team Building, Fast Learner, Willingness to Learn, Active Listener and Adaptable to Changes

**WORK EXPERIENCE:**

**Company-** SoftDEL Systems Pvt. Ltd., Pune. (Industrial Grade Networking and Control Solutions)

**Position 3-** Sr. Software Engineer – Embedded – April 2015 to till date.

**Position 2-** Software Engineer – Embedded – August 2013 to March 2015.

**Position 1-** Trainee Software Engineer – Embedded – March 2012 to July 2013.

**Project 1: Model Based Development (March-2012 to Nov-2013)**

Client: SCSK, Japan.

Project Synopsis: Model based development for automotive domain. Project was related to MILS(model in loop simulation) and SILS execution.

Team Size: 10.

Role:

* Execution of MILS and SILS using MATLAB.
* Visual Basic scripts development for internal project automation.

Technology used:

* Matlab

**Project 2: BACnet stack product maintainance (Dec-2013 to March-2014)**

Client: Crestron, USA.

Project Synopsis: Crestron is having BACnet devices for Building automation. BACnet protocol enhancement was done as per the requirement. Issues related to coverity warnings.

Team Size: 2.

Role:

* Development and testing.

Technology used:

* C language for Windows and Linux operating system

**Project 3: BACnet/IP and BACnet-MS/TP Stack (**for **Windows** and **Linux) (April-2014 to Nov-2015)**

*Link:* [*http://www.softdel.com/bacnet-stack/*](http://www.softdel.com/bacnet-stack/)

Project Synopsis: BACnet is a [communications protocol](http://en.wikipedia.org/wiki/Communications_protocol) for building automation and control networks. The protocol provides mechanisms for computerized building automation devices to exchange information, regardless of the particular building service they perform. This project involves development of a multithreaded library that incorporates the functionalities of BACnet over IP and MS/TP networks.

Team Size: 3 to 15.

Role:

* Design and development of BACnet/IP and BACnet-MS/TP stack library in C-language.
* Design and implementation of new BACnet services and objects in the protocol stack.
* Design and implementation of console based applications for stack testing.
* Porting of stack from Windows OS to Linux OS, from 32-bit OS to 64-bit OS.
* Enhancing stack design, code optimization and customizations as per OEMs requirements.
* Unit testing of codes written and sanity testing of stack.
* Debugging, root cause analysis, finding errors and fixing the same.
* Review of codes written by other team members.
* Review of test cases, test logs and test scenario identification.
* Documentation of project, effort estimations, task planning and creating presentations for stack.
* Knowledge transfer to team members regarding stack design and BACnet protocol.
* Answering customer and pre-sales queries related to BACnet stacks.

Technology used:

* C language for Windows and Linux operating system

**Project 4: Linux Based SRCM (Setra Room Conditioning Monitor) (Dec-2015 to October-2016)**

Client: Setra Systems Ltd., USA.

Project Synopsis: Setra SRCM is BACnet enabled module & is based on Toradex Colibri-VF50 Cortex A5- controller module with 7” LCD connected to it. We have developed the custom hardware around this module having ADC, DAC interfaced on SPI of Colibri-VF50.

Team Size: 7.

Role:

* Understanding and analysis of the stack given by Vendor.
* Development of Integration layer above the BACnet stack provided by the client. Integration layer is developed in C++.
* Application development in QT for testing of the integration layer.

Technology used:

* C and C++ language for Windows and Linux operating system

**Project 5: Molex Gateway Application (November-2016 to April 2017)**

Client: Molex, USA.

Project Synopsis: This project is to develop a Gateway Application which will monitor and configure basic parameters (brightness) of Molex devices such as light fixtures and translate and expose them as into BACnet network as BACnet objects.

Team Size: 14.

Role:

* Understanding of the existing Molex lighting system.
* Mapping of the protocol into BACnet.
* BACnet Stack development in C language.
* Application development to test the BACnet stack.

Technology used:

* C language for Windows operating system

**Project 6: KONE Gateway Application (April-2017 till Present)**

Client: KONE, USA.

Project Synopsis: This project is to develop a Gateway Application which will monitor and configure basic parameters (read, write, alarms, etc.) of KONE devices such as Lifts and Escalators and translate and expose them as into BACnet network as BACnet objects.

Team Size: 14.

Role:

* Understanding of the existing KONE specific protocol related to Lifts, Elevators and Escalators.
* Mapping of the protocol into BACnet.
* BACnet Stack development in C language.
* Application development to test the BACnet stack.
* Gateway application development

Technology used:

* C and C++ language for Linux operating system

**ACADEMIC RECORD:**

* Certificate course in **Embedded System Design** from ICIT, University of Pune in year 2012.
* **Bachelor of Engineering** in **Electronics and Telecommunication** from Bharati Vidyapeeth’s College Of Engineering for Women, **Pune University** with 64% in year 2010.
* **HSC** from Maharashtra (Pune) Board secured 75% aggregate marks in year 2006.
* **SSC** from Maharashtra (Aurangabad) Board secured 88% aggregate marks in year 2004.

**ACHIEVEMENTS AND EXTRA CURRICULAR:**

* ***Certificate of Excellence*** awarded by SoftDEL in year 2016.
* Attended various technical workshops and participated in various state level and national level technical paper presentation and project competitions.
* Participated in various sports in school and college and won prizes.
* Active participation in event organization in school, college and workplace.

**ATTRIBUTES**

* Innovative and flexible in thinking. Analytical mind and curious to extend new ideas regarding development.
* Excellent Problem solving skills and Debugging Unknown Code.

## PERSONAL DETAILS

* Name Shruti Vasantrao Kulkarni
* Date of Birth 17 December 1987
* Sex Female
* Marital Status Married
* Languages Known Marathi, Hindi, English
* Have passport Yes

**DECLARATION:**

The above mentioned information is true to the best of my knowledge.

**Place: Pune. Shruti Kulkarni**