Keyur Varia

Embedded Firmware Engineer (B.E. ECE)
eInfochips An Arrow Company

(+91)88666-22376
(+91)94094-11441
keyur.varia@gmail.com

WORK EXPERIENCE

June 2020–Current — **eInfochips An Arrow Company**, *Ahmedabad*, Gujarat.
Senior Engineer

- Involved in industry refresh 2.0 project to develop remote operated smart cranes for Cattron.
- Supported hardware team for board bring up targeting STM32 Micro-controller.
- R&D on BLE5 for Remtron-S project to check the range of the connected devices on the different PHY.

July 2016–June 2020 — **System Level Solution**, *Anand*, Gujarat.
Engineer

- Pioneer task is to do development in **C language** as per the GBCS specifications given for electric meter and gas meter for (EDMI), as well as debugging and bug fixing to enhance performance and stability to client.
- Actively participated to create a library in C# for the GBCS validation tool which is proprietary product of SLS.
- Perpetually working as an on-site active support engineer for UK Clients (EDMI, Telefonica) since last one year.
- Involved in COSMOS project to maintain Dell rack based servers.
- Experience in working with **FreeRTOS** and various controllers(NXP, LPC, ARM Cortex-M4).

SKILLS

Programming Languages	C, Embedded C, C++, C#, LaTeX
Comm. Protocols	I2C, SPI, UART, TCP/UDP, BLE5, IPMI, Zigbee, DLMS, ASN.1
Development Environment	Simplicity Studio, LPCXpresso, MCUXpresso, Visual Studio, Eclipse, LabVIEW, TestStand, Keil, MatLab
Project Management Tools	JIRA, JAMA, Jenkins, Tuleap, SVN, GitHub, Agile, Scrum, MISRA Coding Standard, Git bash, Gerrit
Micro controller	NXP LPC43xx, LPC18xx, Arm Cortex-M4, EFM32, EFR32, STM32
Debugging Tools	Saleae Logic Analyzer, Ubiqua Network Utility tool, JTAG
Embedded OS	RTOS, Linux, Micrium OS
Miscellaneous	Debugging, Test Firmware, Board Bring-up, Problem solving, Bug fixing

PROJECTS

June 2020–Current — **Remtron-S(Firmware Development - C)**, *eInfochips, Gujarat*.

Remtron is a machine control device with a pair of units Operator control unit and Machine control unit. The goal is to design machine control using wireless connectivity on equipment such as EOT Cranes, Tower Cranes, Ship Loaders, Mobile Hydraulic vehicles, and Forestry winches. I am responsible for designing both the main firmware as well as production firmware targeting the Si-Lab controller for Cattron (US based firm). I am also involved in client communication for design and development. The project also includes Micrium OS and communication protocols like I2C, SPI, and UART.

June 2020–Current **Industry Refresh 2.0(Firmware Development - C)**, *eInfochips, Gujarat*.
The aim is to build remotely operated Smart Cranes. I am responsible for designing the production firmware and addressing the bugs targeting the Si-Lab controller for Cattron (US based firm). I am also involved in client communication for design and development. The project also includes Micrium OS and communication protocols like I2C, SPI, and UART.

Aug 2019–June 2020 **COSMOS(Firmware Development - C)**, *SLS, Gujarat*.
Involved in development and client communication for lower level controllers for Dell rack based servers. This project is all about controlling, data collection from sensors and cooling of rack based servers which includes LPC micro-controller, RTOS, SC-BMC (over I2C) communication using IPMI protocol and many other peripherals.

July 2016–July 2019 **SMETS - II/III(Firmware Development - C)**, *SLS, Gujarat*.
I have experience to deal with various protocols like **ZigBee Smart Energy Profile**, **DLMS** (Device Language Message Specification protocol), **ASN.1** (Abstract Syntax Notation One) protocol and **MISRA** (Motor Industry Software Reliability Association) for firmware development projects in C programming language.
I have handled different project managing tools like SVN, JIRA, JAMA, Tuleap and Jenkins to run regressions during this time.

June 2017–Dec 2017 **GBCS Validation Tool**, *SLS, Gujarat*, Team of Three.
In this project, I developed library in **C#** for the GBCS Tool which is solely a proprietary product of SLS. I played vital role by developing full back-end of the application called GBCS Validation Tool, this application is automated way to test and validate all the digital meters. This application is appreciated by UK clients of our company. This tool has replaced LABVIEW and TestStand in Telefonica

Feb 2016–Apr 2016 **LAN Acquisition System**, *Vector India*, Individual.
In this project I established communication between I2C devices (RTC), displayed voltage of the channels on LCD using SPI protocol, ADC device. Simultaneously Displayed same output on UART and Linux (ubuntu), and transferred that data from one PC to another in Linux using socket programming.

Jan 2014–Apr 2014 **Color Detection by Image Processing**, *Classroom Project*, Team of Two.
In this project we did the sorting of objects by their Color through image processing. We used Camera and Mat Lab for image processing, Relay, power window and Arduino Controller for controlling the Conveyor belt.

TRAINING

October 2015–April 2016 **Vector India Pvt. Ltd**, *Bangalore*.
Gained competency in programming languages like C, C++, also got knowledge of embedded programming and socket programming at hardware level.
Also got noesis in system level by learning Linux environment. Implemented IPC and multi threaded programming models in my erudition. Ranked in top 5% among all students in that year.

EDUCATION

2010–2014 **B.E Electronics & Communication Engineering**, *Gujarat Technological University, Gujarat*.
CGPI - 7.6