Resume

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OBJECTIVE :-

Using my programming skills to develop exciting embedded product & to provide the best quality and technical solution to the organization for continued growth and learning experiences.

PROFILE :-

2+7 year of working as **Embedded System Developer** in various sector like **IOT, firmware, Application programming** with exposure to the following,

Technologies :-

Embedded Applications	: - GCC, MSP430gcc, MSPdebug, Code Composer Studio, Keil4.0/5.0, MPLABS 4.05, Logical analyzer, Energia, Arduino, Eclips , VI/Sublline/nano editor, Minicom, SAM BA, Hexterm, Node Red.
Languages	: - Embedded C , C++, Python, Sqlite3, JSON.
Protocol	: - I2C, SPI, UART, ADC, SMBUS, DMA protocols.
RTOS	: - uCOSII, TI-RTOS.
Embedded Microcontrollers	: - TI- MSP430g2553/5529, NORDIC- nrf51822/422 , nrf52832, TIVA c, cc1310/50, ARM7- LPC2148, ARM9 – AT91SAM9260, PIC18f4552, PIC16f458, PIC24fj256gb606, PIC24fj40k70, Teensy3.1/2, Teensy3.5/6, Arduino – UNO/MEGA, BLE-NANO(NRF-REDBEER), Raspberry pi 2/3/b, Orange pi mini.
Networking	: - MQTT , ZMQ, TCP/IP -UDP Protocol.
Environments	: - Linux, Window, Raspbian, Debian 8.7, Armbian 5.25.

Exposure Summary :-

Micro-embedded technology	(Jul/2015 to Jul/2016) - Development in Embedded
Four-Byte Embedded Solutions	(Aug/2016 to Mar/2017) - Development in Embedded
Conn-Viva technology pvt ltd	(Mar/2017 to till) - Embedded Software Developer

Educational Qualification :-

Examination	Discipline / Specialization	School / College	Board/ University	Year of Passing	Percentage
B.E	E&C	D.I.E.M.S	Dr.B.A.M.U	2015	71.78
T.E	E&C	D.I.E.M.S	Dr.B.A.M.U	2014	63.00
S.E	E&C	D.I.E.M.S	Dr.B.A.M.U	2013	62.66
F.E	E&C	D.I.E.M.S	Dr.B.A.M.U	2012	63.13
H.S.C	PCM + I.T	S.B.COLLEGE	M.S.B.T	2011	53.33
S.S.C	S.S.C	G.V.M	M.S.B.T	2009	74.92

Skills : -

- Experience in developing applications which use memories like NAND/NOR Flash, SD card, Ethernet, Graphic and TFT LCD Displays, Biometric Sensors, GPS, GSM-GPRS, Wi-Fi, Printers and scanners, I2C, UART connected Devices, SPI Connected Devices.
- Experience on POSIX Api's, Inter Process Communication (IPC), Services-Crown job, Semaphores -binary/countable, Mutex, Signaling – message/queue, Event, pipe, socket, Pthreads and Multi-threading areas, handling interrupts.
- Exposure on OS based IOT modules like Raspberry pi Zero/2/3b, Orange pi mini/zero, Beagle Bone Black, Arm 11(at91sam9260)
- Experience in TI/free Rtos – Scheduling, Task Management, Priority cases, Timer,Swi , Hwi.
- Experience on interfacing of Accelerometer(3/6/9- axis), GSM, GPS, ZigBee, RF transmitter/ receiver, Bluetooth, Wi-Fi, Load cell, Camera, Nand flash, USB.
- Experience in Embedded C/C++ Programming, Python , RTOS, shells scripting, MQTT /ZMQ protocol.
- Knowledge about Curl programming, Sqllite3, JSON protocol, TCP/IP, UDP.
- Knowledge about Unix operating system, device driver, system calls, boot loader, uboot, system architecture

WORK EXPOSURE :-

CURRENT PROJECT :-

Project Title	: **Smart Farm System**
Language of Implementation	: C Programming .
Tools	: Code Composer Studio 7.4.
Platform	: Ti – CC1350, PIC24fj256gb606.
Environments	: Ti – Rtos, C programming.

Version1 :

Role :- I have done Application programming worked on ti-rtos api-pthread creation, thread management , mutex semaphore. Communication between two devices by using RF driver – configuration of rf driver. Interfacing of accelerometer(bmx055) and mcu by using I2c driver in ti-rtos.

Version2 :

Role :- Writing library of I2C,SMBUS,DMA,UART,ADC PROTOCOLS for Interfacing of Accelerometer(bmx055), Temperature sensor(mlx90164), Writing RTCC API for real time clock with calender, Debugging using PICkit3 MPlab debugger and Logic Analyzer.

DESCRIPTION :- Collection of the data in form of animals activity like body temperatures, step count. Then we use that data to analyze there physical activity.

PROJECT 1 :-

Project Title	: **Temperature Gun**
Language of Implementation	: Embedded C Programming.
Tools	: Code Composer Studio 7.4, MSP430gcc, MSP430debug.
Platform	: Ti – MSP430g2553.
Environments	: Linux.

Role :- Writing library of SMBUS,UART,ADC PROTOCOLS for Interfacing of Bluetooth module(HC-05), Temperature Sensor(MLX90164),Debugging using CCS debugger and Logic Analyzer, Application development.

DESCRIPTION :- Application is use in Medical facility. for reading every hour ear temperature and send over bluetooth to mobile phone, Store the reading in mobile phone.

PROJECT 2 :-

Project Title : **Bar-code Reader**

Language of Implementation : Python3, Bash Scripting.

Tools : Nano editor, Python3, Minicom, MMC Flasher, SSH, VNC, Opencv.

Platform : Orange Pi.

Environments : Armbian_5.25, Linux.

Role :- I have done installation all environment and dependency of packages. And Application programming to read barcode and connect bluetooth with handshaking between bluetooth devices, work on some bluetooth services, shell script to run program on startup by using crown jobs and worked on some image processing library(zbar, opencv).

DESCRIPTION :- Read bar-code and send it to the android application. Due to small size and some broken prints, todays barcode scanners can not read barcode. We implement the system which capture the image of bar-code then we did some image processing tool open source zbar,opencv and send the bar code to android application by using bluetooth services.

PROJECT 3 :-

Project Title : **Smart Weighting Machine**

Language of Implementation : Embedded C.

Tools : Code Composer Studio, Energia, Hexterm.

Platform : TI - msp430g2553.

Environments : Linux.

Role :- I have done firmware Programming and Uart protocol to interfacing with gps and bluetooth module, interfacing of loadcell, hx711, switches.

DESCRIPTION :- The project is based on IoT technology which Read Weight of object and location of Weighting Machine and send longitude-latitude, date/time and weight to server. We automate the process where employees goes to the source area and took reading of cows milk(weight,density) manually. We automate this process where weighting machine automatically takes reading and send it to server like weight, location, date and time.

PROJECT 4 :-

Project Title : **Biometric Device**

Language of Implementation : Embedded C.

Tools : vi editor, Minicom, SAM-ba, TERA terminal.

Platform : ARM 9 (AT91SAM-9260)

Environments : Linux / Debian.

Role :- Interfacing of TFT LCD Displays, Biometric Sensors, Wi-Fi using I2c, Spi protocols, and Application developing -multi threading, scheduling, semaphore, mutex. synchronization of Web application and device application – json, curl, tftp protocol.

DESCRIPTION :- The project is based on IoT technology, finger print based Time and Attendance Management , to organizations of all sizes use time and attendance systems to record when employees start or stop work, and department where work is performed. However, it’s also common to track meals and breaks. It enables an employer to have full control of all employees working hours. It helps control labor costs by reducing over-payments.

PROJECT 5 :-

Project Title : **GSM Base Notice Board**

Language of Implementation : Embedded C.

Tools : Keil, Flash magic, GSM900, Graphical LCD.

Platform : ARM 7 (lpc2148)

Role :- GSM module send in large amount of data to store this in readable format some breakpoints have to handle buffers,pointer buffer should not get full or overwrite , configuration of Uart interrupt handler,i have done Interfacing of gsm900 and GLCD to lpc2148, and I have done firmware programming .

DISCRIPTION :- By interfacing of GSM900,GLCD Display and lpc2148, we have made a notice board application for a college. It takes an input from text send through recognized a mobile number which is stored in device and display it on LCD screen.

PROJECT 6 :-

Project Title : **Elevator**

Language of Implementation : Embedded C.

Tools : MPLAB, Pickit2, Contact Switch, Load cells, Lcd 16*2.

Platform : PIC Microcontroller (pic18f458)

Role :-interfacing of loadcell, hx711 and contact switch, 16*2 lcd, interrupt handling, application programming.

DISCRIPTION :- This lift is equipped with advanced features of indicating its instantaneous capacity of towing person. We have put display to show inside weight of occupants and comparing it with its load capacity and display the weight it can accommodate to outside persons. If weight exceeds the load capacity then it will not read call from outside and reduce the wastage of opening and closing time of door. One advanced feature of system is , if no person in lift then system will automatically put fan and light off.

ACADEMIC PROJECTS :-

Project : **Smart Irrigation Controller**

Language of Implementation : Embedded C.

Platform : PIC Microcontroller.(pic16)

Operating System : Windows XP.

DISCRIPTION :- Detecting water level in well and moistures level of soil controller take action on supply of water pump. GSM module is used which gives text alert and present condition of system.

ACHIEVEMENTS :-

- Represented college for ELECTRO-VIHAN EVENT in 2014, organized by GATE COACHING
- Participated in sports of inter college level and won first prize in K.C.E College of Engineering Nasik.
- Represented College as an Active member of QUSAAR-2013, Youth festival.
- Handled Sport secretary position for two year 2014 and 2015.

PERSONAL DETAILS :-

Date of Birth : 7th November 1993

Gender : Male

Marital Status : Single

Nationality : Indian

Address : Shradha Heritage ,Pimple Saudaghar, Pimpri Chinchwad, Pune