PANKAJ MORESHWARRAO DAHILKAR

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Profile Summary:

Electronics Engineer with total **5 years & 6 months of experience** in Electronics Product, Firmware design & development.

- Working on to design cross platform device monitoring application in Qt C++.
- Worked on 8-bit microcontroller-based product development like VA meter, Water Pump Automation System.
- Worked on IoT communication technologies like GPRS, GSM, Esp8266, Xbee Module.
- Worked on Android App development for automation systems using App Inventor, for Bluetooth controlled, IoT based automation.
- Designed and developed more than 200 projects under Iot and Embedded systems.
- Extensive Experience on Analog, Digital sensor Interfacing using I2c, SPI, UART protocol.

Professional Experience:

- Organization : BHARAT ELECTRONICS Bangalore
- Designation : Contract Engineer
- Duration : Dec 2018 to Till now

- Organization : L-tech Labs Wardha, India
- Designation : Research Engineer and Project developer
- Duration : Aug 2013 to Feb 2018

Technical Skills:

- **Languages** **:** C Language, C++ ,python.
- **Microcontrollers** **:** 8051, AVR Atmega 328, Atmega 2560,ESP 8266,Pic,Raspberry Pi.
- **IDE/Tool** **:** Keil mVision 4, C51 Compiler, QT 5.12,Arduino Ide, mikroC PRO for PIC, MIT Appinventor for Android App.
- **Technology** **:** GPRS, GSM, Xbee, Bluetooth Communication
- **Communication Protocol** **:** UART, I2C, SPI
- **Operating System** **:** Linux Operating System, Device Driver

Academic Profile:

Under Graduation	**Bachelor of engineering in Electronics and Telecommunications engineering**
Institute	Bapurao Deshmukh College of Engineering, Wardha.(RTM Nagpur University)
Percentage of Marks	70
Year of Passing	2013

Project Summary:

Project Name	**Serial Device Parameter Monitoring Application**
Environment	Qt 5.12 C++, Qml based cross platform software development environment
Protocols	UART, UDP
Client	BEL
Role	Software Developer
Description	This system used to detect and decode data packets coming from high speed serial equipment's through UART. This packets are analysed in real time, The Gui allows user to Select required parameter of device. The aquired data then sent to other device through Multicast. System is cross platform worked on both Linux and Windows. An android Application also part of system which is used to monitor multiple devices at same time wirelessly.
Responsibility	▪ Design, develop application. ▪ Integrate and test setup application on system and finding out the root cause of bugs and fix them.

Project Name	**Digital Mobile Radio Relay / Mobile Communication Terminal**
Environment and Chipset	Linux RHEL 6
Protocols	TCP/IP, SNMP
Client	Indian Air Force
Role	Device Configuration Support
Description	multilayer communication system referred as DMRR/MCT when deployed in tactical defence network will provide last mile access connectivity to remote subscriber over radio/satcom/fiber link via NLDSP point of presence. It contains self sufficient power system with DG set & UPS, Centralized Network Management System.
Responsibility	▪ Worked with team in configuring, troubleshooting and maintaining DMRR/MCT Systems. ▪ We need to install software and configure network devices. ▪ Troubleshooting : Rectified many issues in Radios, Network Accelerator devices by instituting best practices in system analysis, software auditing. ▪ Provided support for Remote Network Management System (RNMS) running on RHEL based Linux systems workstation. ▪ Configured and program AMF controllers based on PIC microcontroller for controlling DG Power source.

Project Name	**GSM/GPRS based 3 Phase Induction Motor Starter Autoswitch.**
Environment	Embedded C, Arduino, Proteus Design suit.
Protocols	UART, I2C, GSM
Client	Shree Technologies
Role	Product Developer
Description	GSM/GPRS based 3 Phase Induction Motor Starter Autoswitch used to control and monitor 3 phase induction motor (Water Pump) in agriculture from remote location using simple call or SMS. In this system MCU reads all parameter related to motor like Voltage, Current. It provides Complete protection to motor from faults like single phasing, dry run, overload and keep motor healthy. In case of any faults it will switch OFF the motor and give status to user through SMS. The timing of motor ON/OFF can be send by simple SMS.
Responsibility	▪ Involved in requirement analysis and system design. ▪ Designed PCB on Proteus Design Suit. ▪ Development of GSM communication interface between autoswitch and user Mobile, UART communication interface between MCU and GSM, and I2C communication for store data into EEPROM and Reading RTC. ▪ Reporting the Problems in Bugs Tracker & Solving the Issues. ▪ Testing, Documentation and Assist to QA & Manufacturing team.

Project Name	**24*7 Water Management system based on GSM/GPRS**
Environment	Embedded C, Keil Uvision 4, Arduino Ide, GSM SIM 800, At89s52, Atmega 2560, php html.
Protocols	UART, I2C, GSM,GPRS
Client	Yogiraj Controls, Govt. Tenders.
Role	Product Developer
Description	This system used to provide 24*7 water supply to Village by managing water levels in 3 tanks using sensor and automatic operation of water pump using GSM based system. Remote device on Tank powered by Solar Panel and Battery backup. It senses the water level and send information to Main controller using miss call or SMS on Well and operate pump according to condition. It also senses Faults condition and provide complete protection to motor from faults, and send all info to User through SMS, also update all information on Web portal.
Responsibility	▪ Involved in requirement analysis and system design. ▪ Development of communication interface between Tank and Main pump station, UART communication interface between GSM and MCU , and I2C communication for store data into EPROM. ▪ Designed PCB for Tank mounted system , and main system. ▪ Designed Web portal using Html and php for monitoring of motor parameter. ▪ Review of collected data from system. ▪ Reporting the Problems in Bugs Tracker & Solving the Issues. ▪ Testing, Documentation and Assist to QA & Manufacturing team.

Project Name	**24*7 Water Management system based on xbee**
Environment	Embedded C, Keil Uvision 4, Arduino Ide, Digi XCTU,Xbee S10, At89s52, Atmega 2560.
Protocols	UART, I2C, Digi Mesh, GMS
Client	Yogiraj Controls, Govt. Tenders.
Role	Product Developer
Description	This system used to provide 24*7 water supply to Village by managing water levels in 3 tanks using sensor and automatic operation of water pump using Xbee based system. Remote device on Tank powered by Solar Panel and Battery backup. It senses the water level and send information to Main controller on Well and operate pump according to condition. It also senses Faults condition and provide complete protection to motor from faults, and send all info to User through SMS.
Responsibility	▪ Involved in requirement analysis and system design. ▪ Development of xbee communication interface between Tank and Main pump station, UART communication interface between xbee and MCU , and I2C communication for store data into EPROM. ▪ Designed PCB for Tank mounted system , and main system. ▪ Review of collected data from system. ▪ Reporting the Problems in Bugs Tracker & Solving the Issues. ▪ Testing, Documentation and Assist to QA & Manufacturing team.

Project Name	**Single Phase VA meter.**
Environment	Proteus Design Suit, Mikro C for pic, pic 16f912
Role	Product developer
Description	Pic microcontroller based accurate and Reliable with Voltmeter and Ammeter based on True RMS Technology. CT based meter for Low VA burden. With four digit seven segment display. With accuracy of 1V.
Responsibility	▪ Involved in requirement analysis and system design. ▪ Design PCB for Same. ▪ Reporting the Problems in Bugs Tracker & Solving the Issues. ▪ Testing, Documentation and Assist to QA & Manufacturing team.

Project Name	**IoT , Bluetooth Based Smart Plug system**
Environment	Proteus Design Suit, Arduino, ESP8266, App Inventor for Android App devlopment
Role	Product developer
Description	This device is standalone power outlet which controlled by android app either by Bluetooth or by WiFi. For internet based connection adafruit Io services was used. Android app was developed in app inventor platform.
Responsibility	▪ Involved in requirement analysis and system design. ▪ Design PCB for Same. ▪ Design and developed android app. ▪ Reporting the Problems in Bugs Tracker & Solving the Issues.

Personal Information:

1. Date of Birth : 24 Jan 1992
2. Gender : Male
3. Marital Status : Unmarried
4. Languages Known : Marathi, English & Hindi

Declaration:

I hereby declare that the above written particulars are true to the best of my knowledge and belief.

Place: Bangalore (Pankaj M. Dahilkar)