Pallavi Dahikar
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CAREER SUMMARY

- Embedded Design Engineer with **4.5 years of experience in System Automation and Wireless Data Communication.**
- **1.3 year of experience** as a "Trainee Linux Instructor"
- **6 months of experience** as a Assistant Professor
- Preparation of Process Flow chart, Schematic for Peripherals Integration with controller, Bill of Material as per Schematic
- Firmware Development and Upgradation
- Proficient in **Embedded C,C language and C++** coding.
- Knowledge on **CAN Controller ,AUTOSAR (automotive domain)**
- Wireless Real Time Data Handling
- **RF Site Survey** for High Power Module
- Proficient in **Hardware and Software** testing and its integration.
- Technical Support to the field technician team
- Handled **SCADA** Software for client Application
- Interfacing **GSM,GPRS modem with Controller**
- **Validation of AT command set.**

TECHNICAL SKILLS

- Languages   : C, Embedded C , C++, Basics of Java ,Linux , Matlab
- Operating Systems   : Windows XP/7, 8, Linux.
- Micro Controller   : Microchip PIC , Jennic controller, AVR, 8051,Zigbee module
- Standards/ Protocols   : 802.15.4,Zigbee, MODBUS protocol, L&T protocol
- Communication Protocol   : UART, SPI,I2C, Ethernet, RS232,RS485
- Network Protocol   : HTTP,SMTP,TELNET,SSH, SMTP
- Network Topology   : Star Topology, Mesh Topology, point to point communication
- Electrical Instruments   : IDMT Relay, Capacitor Bank, Energy meter
-   Transformer (CT,PT, Step-Up, Step Down) Heatsink ,Breaker
- Electronic Instruments   : Opto-coupler, Operational Amplifier

PROFESSIONAL EXPERIENCE

March 2018 to till date
Role   : Embedded Design Engineer
Organization   : RF Arrays Systems Private Limited
Client   : SNDL, Nagpur
Project Name : Volt-VAR Control under Advanced Metering Infrastructure for Smart Grid, Spanco, Nagpur.

Description : As the distribution sector has a greater role to play in minimizing the power losses and running the grid efficiently. The information thus gathered will be helpful in improving the efficiency of the infrastructure right from the 33/11KV distribution Feeder to the distribution Transformer down to the energy meter at the customer premises.

Responsibility:

- Site Visit to Substations under SNDL
- Data Collection and data Analysis for comparing power factor ,kWh, Reactive power component to reduce losses
- Specification of Capacitor Banks and its effect on power factor correction

November, 2015 to Dec 2018:
Role : **Firmware Developer and System Integrator**
Organization : **RF Arrays Systems Private Limited**
Client : **Brihan Mumbai Electricity and State Transport, Mumbai**
Project Name : **Substation Automation for (33KV/11KV) substation under BEST**
Tools : MPLAB IDE, MPLAB ICD3, Apache TomCat WebServer , Mini SCADA
Networking : 2G, 3G technology, Ethernet, Zigbee Mesh Technology
Platform : Windows XP, Linux, MS DOS

Description : RF Arrays has designed & developed an unmanned substation data acquisition solution consisting of RF Arrays Board with a hybrid network of RF Arrays High Power Modules & GSM/GPRS. This data acquisition board can measure, monitor, and transmit parameters like Voltage, Current, Frequency, PF, KV, KW to a central control room.

Responsibility:

Upgradation of Firmware by mapping IO ports to control and monitor various processes
- Interfacing of GPRS modem from SIMCOM with Microchip Pic Controller
- **Validation of AT command** Set for 3G technology integration
- Testing Hardware (Remote Terminal Unit) with firmware.
- Real Time Data Polling and Scheduling
- Designing of Technical write up for client application
- The user friendly software upgradation that runs on a controller PC/Laptop, communicates with Hardware units at the substations.

April 2017 -March 2018:
Role : **Embedded Design Engineer**
Organization : **RF Arrays Systems Private Limited**
Client : **CWE, Nagpur**

Project Name : AMR for MES at Kamptee Cantonment
Role : System Integration and Testing
Protocol : L&T metering Protocol, IEEE 802.15.4 standard
Platform : Windows XP

Description: AMI system using wireless ZigBee Technology, which can **remotely monitor** and **collect data** from the utility energy meters of the consumer without any human intervention. This wireless network application will benefit the utilities wherein they can actually quantify the real time

consumption of the consumers; thereby ascertaining any discouraging activities and disparity between the supply & consumption of electricity.

Responsibility:
- Development of **requirement based test cases** and procedures for Automatic Metering Infrastructure
- **Visited to site for network establishment** in Kamptee Cantonment
- 3dbi antenna is tested and integrated with module to increase transmission capacity.
- Monitoring of complete data cycle --RS232 To ZigBee Packet Transmission (ZigBee node To Router) ZigBee to Ethernet packet Conversion (Using Gateway) Gateway to Database Server for Billing & Processing.
- Monitored data as per billing cycle to avoid concealment of power.

November, 2016 to March 2017
Current Role: Embedded Design Engineer
Organization: RF Arrays Systems Private Limited
Client: OCW, Nagpur
Project Name: Wireless Water Meter Automation, under NMC Nagpur
Description:
Responsibility:
- Firmware Upgradation
- Studied datasheet of Zener water meter
- Studied the working of reed switch integrated with meter
- GUI interfaced data collection for billing purpose

March 2008 to March 2009:
Current Role: Embedded Design Engineer
Protocol :   JenNet IP
Organization: RF Arrays Systems Private Limited
Client: NMC, Nagpur

Project Name**: Wireless Street Light Control System Automation**
Description: RF Arrays Wireless Dimmable Ballast reduces the power that the ballast-lamp system requires to produce the same intensity of light produced by conventional ballasts. Another advantage of electronic ballasts is that they have approximately one third the internal energy losses of electromagnetic ballasts. This lower loss rate means improved efficiency and reduced heating loads.
Responsibility:
- Did **Firmware development** for reduction in power consumption by introducing scheduler
- Data broadcasting and receiving was done through **CSMA-CD protocol to avoid data congestion**
- Did Wireless operation and control through **GSM module**
- **Integrated Energy meter** with system to measure consumption
- Prepared Technical write up and **User Manual**
- **Technical Support** to the team on site

November, 2007 to June 2008
Current Role: Embedded Design Engineer
Protocol : JenNet IP
Organization: RF Arrays Systems Private Limited
Client: eSMART Solutions, Nashik
Project Name: **Wireless Lighting Control for Building Automation**
Description: In Building automation project the intensity of the light was reduced by monitoring motion sensor and light sensor detailing.
Responsibility:

- Prepared **Schematic** as per client requirement.
- Interfacing of sensor **by I2C Protocol** and lights by **SPI protocol**.
- **Tested Hardware Boards** for proper voltages and continuity of PCB tracks.
- Prepared User Manual , Command Manual for project
- **Tested with 5dbi antenna** to increase range of low power module
- **GSM modem is integrated** for control and monitor of devices.

ACADEMIC RECORD

M.Tech (Year of Passing 2014)	Masters in Embedded System Technology from Amity University with 8.8 CGPA
B.E (Year of Passing 2007)	B.E in Electronics from Shri Ramdeobaba Engineering College, Nagpur with 68%
H.S.S.C (Year of Passing 2003)	State Board with 83.33%

TRAINING AND WORKSHOP

- **4 months** certification course of **"C"** from **JAN2015-APRIL2015**
- **7months** certification course of **C++ and JAVA BASICS from MAY2015-NOV2015**
- **6 months** training in **"ALSTOM PROJECT INDIA LIMITED" during Masters.**
  Topic of dissertation was Distributed Control System for Combined Cycle Power Plant, its design and Simulation in Simulink (Matlab) **from DEC 2013 -MAY 2014**
- **15 Days** workshop on Robotics and Intelligent Systems **from 15 May2013-29 May 2013**
- **4 months** Red Hat Linux Certification Participation **from SEP2009 –DEC2009**
- **3 months** certification of **Embedded Systems Programming** from **KSET**

AWARDS AND ACHIEVEMENTS:
- First Prize in CONTRAPTION in IEEE TECHNOVISION (National Level Technical Symposium)
- Poster Presentation on RTOS for AVIONICS (in Mobile and Embedded Technology International Conference)

PERSONAL DETAILS

Date of Birth   : 25/06/1985
Nationality   : Indian
Passport Number   :S2882222
Marital Status   : Married
Spouse Name   : Ritesh Wamanraoji Dahikar
Permanent Address   : 88,Ulhas nagar, Manewada Road,Nagpur
Languages Known   : English, Marathi and Hindi

DECLARATION

I Pallavi Dahikar hereby declare that all the information given above is true to the best my knowledge.

Date: 02/01/2019

                                                                Yours sincerely,

Place: Nagpur