**RESUME**

**DIVYA DARSHINI.B**

Room No. T3,

Lakshmi Enclave,

6th cross, RMV 2nd stage,

Bangalore-560094

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**OBJECTIVE:**

To work in a professional environment that will exercise fullest of my knowledge and give me ample opportunity to learn most of the evolving technologies and thus ensuring mutual growth.

**QUALIFICATION:**

Completed M.Tech in Digital Communication Engineering from MSRIT, Bangalore in 2014 with CGPA of 9.11 and B.E in Electronics and Communication from GSSSIETW, Mysore.

**SKILLS SUMMARY**

* Languages : C, Java, Perl scripting, PHP
* DBMS Packages : MySQL, Oracle 10g, Antelope
* Development Platforms : Linux, Contiki, OpenWSN, Windows family
* Network Analyzer : Wireshark, NAST
* Simulator : Cooja, NS2, Matlab
* Protocols : 6LOWPAN, RPL, CoAP, MQTT, UDP, TCP/IP, IPV4, IPV6, 802.15.4
* Micro Controller : ARM Cortex, MSP430, 8051
* Gateway platforms : C-DAC i-WASE, Panda Board, TP Link, Netgear
* Mote platforms : C-DAC i-WISE, TelosB, Iris

**WORK EXPERIENCE**

* Presently working on water quality, precision agriculture and smart grid projects as Project Intern at ERNET INDIA since February 2014.
* Assisted in teaching and tutorial for WSN lab and Communication lab, Dept of TCE, MSRIT, Bangalore.

**PRESENT WORK**

* Working on implementation of IPV6 enabled real time automated drinking water quality monitoring system. The system is designed and implemented over 6LoWAPN protocol stack, because of which sensor nodes can also participate in “Internet of Things”. Contiki OS is the simulation environment used for the software implementation of the system. This work also involves understanding different layers of communication architecture, implementing and making changes to the existing protocol stacks.
* Design of closed loop system using the IETF recognized standards such as CoAP, RPL, 6LoWPAN for the treatment of effluents in textile industries. The system is based on the recent WSN standards from IETF such as CoAP, RPL.

**CERTIFICATION**

* Published paper titled “Design of 6LoWPAN enabled Real Time Water Quality Monitoring System using CoAP” at Asia Pacific Advanced Network 38th meeting (APAN 38th), at Nantou, Taiwan.
* Presented and published paper titled “Design of Real Time Water Quality Monitoring System for Domestic and Drinking Water Using Wireless Sensor Network” at “National Conference on Emerging Trends in Communication and Biomedical Engineering (NCECB-2014)”.
* Project titled “IPv6 Enabled Real Time Drinking Water Quality Monitoring System Based on Wireless Sensor Network” was selected and funded by VGST ([Vision Group on Science and Technology](http://www.vgst.in/)) TRIP 2013-14, Department of Information Technology, Biotechnology and Science & Technology, Govt. of Karnataka.
* Certified with the best project award of the year 2013-14 from MSRIT, Bangalore.
* Presented poster for the project titled “Design of Real Time Water Quality Monitoring System for Domestic and Drinking Water Using Wireless Sensor Network” at 27th Nation Convention of Metallurgical and Materials Engineers-2014.
* Participated in the work shop on “Light Runner an Optical test Bench and Its Applications”, organized and supported by MSRIT and IEEE Photonics Society and Fiber Optics Technology.
* Participated in the work shop on “Recent Advances in Computer and Communication Networks”, organized and supported by MSRIT and IEEE Communication Society and IEEE Computer Society.
* Participated in the work shop on “NS2 (Network Simulator 2)”, organized and supported by MSRIT.
* Diploma in Java from NIIT, Mysore ( Oracle and Sun MicroSystems certified )

**PROJECTS**

* **M.Tech Major Project**:

IPv6 Enabled Real Time Drinking Water Quality Monitoring System Based On Wireless Sensor Network (2013-2014). Project carried out at MSRIT in collaboration with Education and Research Networks (ERNET) and IISc, Bangalore.

**Summary:**

In a country like India, very less importance is given to monitor and control the drinking water quality. This is an R&D based project, where an attempt has been made to measure, display and control the water quality parameters in real time using HTTP based CoAP browser. Automated rectification system was also designed and implemented to correct the values of parameters, if they did not lie in the permissible range. Global IP address was assigned to the sensor nodes and a suitable protocol stack for IoT was built. Simulation environment used was Cooja with the support of Contiki OS. Hardware implementation was done using TelosB motes. Characterization and calibration of water quality monitoring sensors was carried out. The project also depicts the usage of Contiki OS, RPL, 6LoWPAN, CoAP and other protocols for building an application using wireless sensor network. GUI has been developed to give a pictorial representation of the variations in sensor data so that detailed analysis of the variations with respect to time can be studied.

**Software:** Contiki OS, Linux, 6LoWPAN, CoAP, Cooja Simulator, MySQL.

**Hardware:** Water quality monitoring sensors, WSN Motes, Base Station, Relay Circuit, Motor, Panda Board**.**

* **B.E Project:**

“Programming the Hardware for an Automatic Robotic Assembly Press” (2010-2011). Project carried out at Bosch Rexroth.

**Summary:**

The objective of this project is to design and program a Mechatronics kit, which combines the knowledge of electrical, mechanical and electronics. The mechatronics kit performs the automated robotic pressing operation. PLC (Programmable Logic Controller) was used to perform this operation. PLC was used as the control system to control all the activities. The system consisted of proximity sensor, pressure sensor, limit switches, push buttons. The signals from these devises were transmitted to the PLC. A response signal was generated by PLC for the signals from these devices and sensors. The response normally involves turning ON and OFF of an output signal. This output signal was used to activate the output devices.

**Tools Used: PLC, Mechatronics kits, Sensors.**

**COURSE WORK**

* Advanced Communication Networks
* Wireless Sensor Networks
* Digital Signal Processing
* Real Time Embedded systems
* Digital Communication

**SOFT SKILLS:**

* Good analyzing ability, Listening capability, Optimistic & Quick Learning ability
* Co operative, flexible, hard working, honesty and sincerity

**PERSONAL DETAILS:**

Father’s name : Balakrishna.R

Mother’s name : Shashikala.N

Date of Birth : 24th April 1990

Gender : Female

Nationality : Indian

Hobbies : Music, Reading, Travelling.

Languages known : English, Kannada, Telugu, Hindi

**DECLARATION:**

I hereby declare that the above mentioned information is true to the best of my knowledge.

**Date:**

**Place: DIVYA DARSHINI B**