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Aniket Katkar

A highly skilled problem solver and a highly productive programmer with Embedded/IOT/Android programming experience currently looking for a full-time opportunity to design and build high performance and optimized solutions for challenging digital world problems.

Technical Skills

Development:	C, Java, Android, Embedded C, Operating systems, RTOS, Linux
Web Development:	HTML5, CSS3, JavaScript, PHP, REST API
Embedded:	Microcontrollers, Arduino, Raspberry pi, ESP boards, Sensors, Internet of Things
Other:	Scrum, Git, Hardware, PCB designing, Electronics, IBM bluemix

Education

- **PGD - Embedded Systems Development** C-DAC, Pune Aug - 2015
- **BE** in Computer Engineering, University of Mumbai (B.E 61.2%) 2015
- **HSC** Maharashtra State Board (78%) 2010
- **SSC** Maharashtra State board (75.38%) 2008

Projects

B.E (Final year project) – Segregation of Objects based on Shape and Color using MATLAB and Robotic Arm.
The project was based on the Image processing toolbox of MATLAB to recognize color and shape of any object place in front of a camera. A robotic arm was used to segregate the objects in their respective units.

CDAC – Linux USB device driver for reading data from GPIO port of BlueBoard.
The main objective of this project, is to implement Linux USB device driver of mass storage on host machine with bulk endpoint. Data read from the GPIO port is shown on the host machine terminal. A test application with GTK based GUI was written for testing.

Embedded and IOT Development (Ushva Clean Technology Pvt Ltd.) –

Intelligent Energy Management Systems:

1. Performed transfer of real time data in form of JSON String[Including Voltage, Current Readings, Packet Count, Timestamp(Epoch value received from NTP server) and authentication parameters] from Microcontroller TM4C 1294 (Product) to IBM Bluemix Server via ESP 12 using MQTT.
2. Wi-Fi event handling, Added SD card support for data storage in case of network failure.
3. Accepting Network credentials during one time setup (SSID, PASSWORD) via web sockets and their storage in SPI flash.
4. Designed Customized Wi-Fi Module PCB including ESP-12 core, on board SD card support and USB-UART converter.
5. Set up IBM Bluemix Servers (Cloudant NoSQL) and applications (NodeRed) to modify and store incoming strings.

Smart Pole:

1. A solar powered self sustained pole which collects Air quality, Noise levels, Humidity samples using Raspberry pi and displayed it on an application made in PyGTK on a monitor.
2. The Smart pole was connected to IBM watson servers and values can be accessed from any location.

Battery monitoring system:

1. Transfer of Battery parameters (Voltage, battery status, percent charging, number of charging-discharging cycles) to IBM Bluemix server.
2. Integrated Battery parameters with Android Application designed for Smart Solar Inverter.

Monitoring device:

1. Developed monitoring device to read sensor values for IIOT applications.
2. Data was sent to IBM watson servers using GSM or ESP8266 module.
3. The data collected was displayed on a web based application separately for seperate machines.

Web Apps (Ushva Clean Technology Pvt Ltd.) –
A web based console that showed the data and statistics of the Intelligent energy management system through IBM Watson and IBM Cloudant.

Android Application (Ushva Clean Technology Pvt Ltd.) -

1. Developed app for monitoring the data received from IBM servers. Plotted realtime, daily, monthly, yearly graphs of Power, Current, Voltage from Solar Panels of the Intelligent Energy Management Systems(IEMS). The app connects to the IEMS through Websocket to send Wifi credentials.
2. Developed app for Battery Monitoring System which showed values of battery voltage and current in real time with graphs.

Smart Car Parking (Embedded, IOT) - Designed and implemented a scenario to tackle parking problems in urban cities. Used sensors to detect cars in a parking lot and display it on an Android app. The project can be scaled by implementing various ideas and algorithms for parking in any space.

Home automation (Embedded, IOT, Android)- Designed and implemented a basic home automation system using ESP8266 Wifi and GSM modules and various other circuits. Any household appliance can be controlled using a Android smartphone having the developed app.
Website Development (HTML, CSS, JS) - Developed static and responsive websites for firms and online portfolios.
Buzalert (Android) - Developed app for showing battery stats, theft alarm and battery alert alarms. (Live on Playstore)

Professional Experience

- Product Developer - Ushva Clean Technologies Pvt Ltd (IIT Bombay Startup) Aug 2016 - Present

Interests

- Do-It-Yourself blogger at artronicsblog.blogspot.in
- Electronics hobbyist and enthusiast
- Watching documentaries reading articles on Startups, tech giants, entrepreneurs, Open source.

Declaration

I hereby declare that the information's furnished above are true to the best of my knowledge and belief.