

## **RESUME**

**HAJARE AJIT RAMA**

**BRANCH: ELECTRONICS (EMBEDDED SYSTEM)**

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### **Career Objective**

To work in the field that challenges my technical analytical and management abilities. I would like to enhance my skills and knowledge while working and contributing towards the goals of an organization.

### **Educational Qualification**

<b>Exam</b>	<b>Institute</b>	<b>University</b>	<b>YEAR</b>	<b>% Marks</b>
M.Sc II	Shivaji University, Kolhapur	Shivaji University, Kolhapur	2012	66%
M.Sc I	Shivaji University, Kolhapur	Shivaji University, Kolhapur	2011	65%
B.Sc	New collage, Kolhapur	Shivaji University, Kolhapur	2010	87%
HSC	Devchand collage Arjun-nagar	Pune	2007	45%
SSLC	Shri.kadshidheshwar High school, Benadi.	Dharwad	2005	76%

## Embedded Knowledge:

**EMBEDDED SOFTWARES :**CS+ for CC,EE ,LCO FOR ETAS,XVIEWER,MATLAB,SAINT 2,CANalyzer,TinaTI,EAGLE,PROTEL,EXPRESS\_PCB,MPLAB,MICROC,TINACAD,KEIL,ARDUINO,VISUINO,REAL PIC SIMULATOR,OSHION SOFTWARE,P SPICE,LABVIEW,PINNACLE,CIRCUIT\_MAKER,XILLINX,SPARTEN,VHDL ,ORCAD CAPTURE,FLASH MAGIC,DOCLIGHT,HYPER TERMINAL,LT SPICE,PROTEUS,WEBINARS BASED VIRTUAL SOFTWARE HANDLING LIKE VMWARE,TURBO C,C++,PASCAL,.NET,ORACLE SQL/PL-SQL,HTML,WEB DESIGNING,P SIM,SAP .

**EMBEDDED HARDWARES:**EMBEDDED CONTROLLER APPLICATION BASED DRIVERS INTERFACING,ADC,DAC,TIMER,COUNTER,INTRUPTS,I2C,SPI,UART,CAN,LIN,EMBEDDED HARDWARE DEVELOPEMENT AND INTEGRATING HARDWARE,BLUTOOTH DRIVER,ZIGBEE\_DRIVER,IR\_DRIVER,GPS\_DRIVER,SERVO\_MOTOR\_DRIVER,DC\_MOTOR\_DRIVER,STEPPER\_MOTOR\_DRIVER,RS-232,RS-485,8051,PIC,DSP,ARM,RAS BERRY PIE 3,ARDUINO,UNO,NANO,MEGA,RENESES,TEXASICS,NATIONAL\_INSTRUMENTS\_DAQS,MOTOR\_DRIVERS,FILTER\_CIRCUITS,REGULATORS,SIGNAL\_CONDITIONING\_CIRCUITS,DRIVERS,SENSORS CONFIGURATION,INTERFACING CONTROLLER 8/16/32/64 BIT,WIRELESS DEVICE INTERFACING,SENSOR INTERFACING,DEVELOPMENT INNOVATIVE\_APPLICATION\_BASED\_EMBEDDED\_PROTO,AUTOMTIVE\_INNOVATION,L AB\_DEVELOPMENT,INSTRUMENTS BUGS FIXING, MICROCONTROLLER UNIVERSAL BOARD DESIGN AND DEVELOPMENT,APPLICATION BASED CIRCUIT DESIGNER\_TESTING,BASIC STUDY OF HMI,AI,PLC,ADAS DRIVERS.

**EMBEDDED CONTROLLERS:**PIC 16F,18F,DSP3010,MSP 430,8051 FAMILY,ARM 2148 FAMILY,ARDUINO.UNO,NANO,MEGA,RAS\_BERRY\_PI,RENESES\_F12,R5F1096,R5F10B MG,ST 32 ARM CORTEX.

**EMBEDDED HARNESS:** WIRING HARNESS, ECU HARNESS, SYSTEM HARNESS, COMMUNICATION HARNESS TESTING, HARNESS APPLICATION ORIENTED DEVELOPMENT.

**EMBEDDED SKILLS:**DIGITAL CODING AND CIRCUITS,ANALOG CIRCUITS,DSP CIRCUITS,CONTRL SYSTEM CIRCUITS,NETWORK THEORY AND CIRCUITS,EMT CIRCUITS,COMMUNICATION CIRCUITS,VLSI,CMOS CIRCUITS.

**EMBEDDED PCBS:** DESIGNING, ETCHING, IMPLEMENTATION AND TESTION RELATED SOFTWARES EXPRESS PCB, EAGLE, ORCAD CAPTURE, PROTEL BOTH SMD PACKAGE AND DIP PACKAGE.

## EMBEDDED PROJECTS:

- “ANTI LOCK BRAKING SYSTEM” Development design coding, algorithm, hardware design presently leading at Suspension R&D, Endurance Technologies Ltd (Automotive MNC) at ECS LAB.
  - Case study for anti-lock braking system
  - Wheel speed sensor speed measure by RPM
  - Speed display by designing the simple module in MAT LAB

- Designed solenoid valve driver for actuator logic
- Hands on experience on ETAS with HIL for ABS activity
- Code return for RPM measurement and actuator driving for abs sample logic
- ABS NI test bench environment design partially completed for the ABS test bench
- Measure and analyze motor current for the threshold limit and observe fault condition by controller and DSO
- Selected PCB design software for the sample proto design and in house development of PCB and analog circuit simulation
- Design and develop wheel speed sensor installation proto and created vehicle wheel environment for the test report
- CAN,LIN,UART,SPI,I2C serial communication and Diagnosis activity done on ETAS and controller.

➤ ECVT Development Strategy studying and proto developed for Battery Management system for milestone application of Electric Vehicle, Automotive.

- Reverse engineering for the concept understanding
- Study algorithm and bench marking for the ECVT
- Case studying for Battery management system, DC to DC converter and charger circuit.

➤ ETAS Application development and tester present activity (Automotive).

- ETAS ICE 5340 features hands on ETAS LAB CAR system
- MAT LAB Plant model interfacing with ETAS

- HIL Environment with ETAS LAB CAR
  - Virtual simulation of ABS and engine Plant model in Experiment environment
  - Signal generator, pwm, digital ourput input, analog input output, hands on with ETAS LABCAR OPERATOR
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- SAINT 2 TOOL for the Diagnosis CAN, LIN, I2C, UART, SPI Communication.(Automotive).
  - CANalyzer Vector tool for Diagnosis, Interfacing, data logging, Fault detection, Automotive.
  - Mat lab Simulink design and development and interfacing with ETAS Environment.
  - Mat lab Sims cape simulation design and development.
  - Mat lab Code generator, S function as per application oriented.
  - Basic Model based development in MAT LAB.
  - State flow logic, Fuzzy logic in MAT lab design and development.
  - Oil level controller using at 89S52 (B.Sc.).
  - Temperature and Humidity monitoring system through VB & Mat lab (MSc).
  - Ultrasonic distance measurement using fuzzy logic (MSc).
  - DC Motor control using Infrared Sensor (MSc).
  - Digital camera interfacing to FPGA slot.
  - Power factor improvement by magnetic flux sensing current sensor.
  - DC motor drive control by using infrared sensor.
  - RF module interfacing to pic16f877a for home security application.
  - 8051 universal board design and implementation interfacing keypad,lcd,sensors,stepper motor,7 segment display, zig bee module etc.
  - PIC 16f877a universal board design and implementation interfacing keypad,lcd,sensors,stepper motor,7 segment display, zig bee module etc.
  - Solar Street light charger circuit design and implement in rural areas.

- Air flow control system Fuzzy neural network application done by using PIC 16f877a.
- Bluetooth code interfacing to PIC 16f877a and drive the robotics basic module.
- GPS and GSM module interfacing through Ethernet module and track the signal through google map for milk survey security application.
- Hardware circuit interfacing to PC through vb, php, c, handle embedded c, matlab etc.
- Design and implement casrgain antenna and measuring the range by electromagnetic field meter.
- Design and implement home security system by using PIC 16f877a.
- Design and implement metal detector robotics by using 8051.
- Design circuit switching and interfacing music player and control manually.
- RF tuning circuit design for FM range detection and measure the require frequency through cro and spectrum analyser.
- Count the no of break points by using infrared sensor and display on LCD through PIC 16f877a.
- Design the digital dimension measurement in industry by using pressure sensor.
- Design the digital circuit for job infection robot for measuring the Mahindra tractor part internal dimension balance by using pressure sensor.
- Wireless dc motor rotating through pic16f877a and infrared sensor.
- Interfacing LM-35, TIP-121, Thermocouple, Thermister, RTD in industry for controlling temperature and maintain to control in linear region by using PID.

### **Working on Sensors:**

- **Humidity capacitive HS-320/220 module.**
- **Ultrasonic distance measurement TX and RX receiver common pair.**
- **Infrared sensor TX and receiver tsoip 1738 module with 38Hz frequency.**
- **Vibration sensor for wall breaking interfacing application.**
- **Alcohol sensor MQ3 for driving security purpose.**
- **LPG 1327 Gas sensor for home kitchen safety purpose.**

- **Pollution MQ-135 sensor for controlling the moist and smoking detection.**
- **LM-35, THERMISTOR, THERMOCAUPLE, RTD Temperature sensors.**
- **Thermistor, thermocouple, RTD sensor for industrial temperature measurement and control.**
- **RF module 433 MHz TX and Rx pair apply various wireless applications.**
- **Metal ky-036 sensor applies in robotics for detection.**
- **Hall Effect sensor measure for dc motor rpm count.**
- **PIR motion sensor pair for saving electricity in remote areas.**
- **Pressure sensor using for measuring Mahindra internal dimension of device.**
- **LDR, Photo transistor, solar conducting cell sensor1 for switching the charger circuit at night time in various applications.**
- **Photo interrupter sensor, photo reflector sensor OPB9000 module.**
- **Proximity sensors solenoid coil, frequency variation magnetic sensor, Hall Effect sensor, Metal detector, Position sensor.**
- **USB interfacing, Serially RS-232 Interfacing, DB-25 parallel communication interfacing with controllers.**
- **Knock sensor, Engine sensor, Crank shaft sensor interfacing and RPM Measurements.**

#### **Research papers:**

- **International paper on “Temperature and Humidity monitoring system”.**
- **International journal paper on “Air flow control using fuzzy logic”.**
- **International journal paper on ”Temperature control using fuzzy rules”**
- **National level seminar on “Ultrasonic distance measurement using fuzzy logic”.**
- **National level seminar on “DC Motor control by PIC based DC driver”.**
- **State level paper on “Cost effective wind mill generator”.**
- **State level paper on “Cost effective Solar street light non-conventional source”.**
- **National level paper on “optimization solar street light with LDR circuit”.**

- National level paper presentation on **“wireless zig bee module for green house security”**
- National level paper presentation on **“optimization of solar street light”**
- International conference on “The role of science & Technology for Sustainable development”, “Multisession Impedance and Frequency Based Low Noise Amplifier for Wireless Communication”, IJCMS ISSN 2347-8527 Volume-7, Issue-2.
- Two Day National Seminar on The lease of Business in India, Article published in ISBN: 978-93-85101-12.
- National Conference on Emerging Trends in Electronics and Computer Application, paper will publish at spring journal “Wireless Green House Security by Embedded System”
- “Temperature Control by Fuzzy PWM Technique” International Transactions on Electrical, Electronics and Communication engineering, ISSN: 2249 8923, vol. 23, no.3, pp.85-52, 2012.
- “Fuzzy logic Ultrasonic Distance Measurement” Proceeding of National seminar on Advances in VLSI Design and Technology (NSAVDT-2012) a Special issue of journal of science information, ISSN: 2229-5836, pp.116-118, 2012.
- “Remote control DC motor using PIC based DC drive” Proceeding of National seminar on Advances in VLSI Design and Technology (NSAVDT-2011) a Special issue of journal of science information Organized by Dept. of Electronics Shankarrao Mohite Mahavidhyalay Akulj, ISSN: 2229-5836 pp.97-98, 2011.
- “Greenhouse Parameter Control Using Controller” A National Conference On Emerging Technologies For Sustainable Developments (NCET-2012) December 27-28,2012 (poster), Organized by Department of Technology Shivaji University Kolhapur, 416004 p:106
- “Optimized Solar Street Light Control” State level seminar on “Non conventional energy source “held on 11th Feb-2012, (Poster presentation) Guledgudd, Karnataka P-587-203.
- “Home Security System Using Embedded Web Server” UGC Sponsored State Level Seminar on “Recent Development In Embedded System” December -21-22-2012, (Poster) Organized by Department of Electronics Rayat Shikshan Sanstha’s, Karmaveer Bhaurao Patil Mahavidyalaya Pandharpur, 2012.
- “Automatic Railway Gate Control System” UGC Sponsored State Level Seminar on “Recent Development In Embedded System” December -21-22-2012, (Poster) Organized by Department of Electronics Rayat Shikshan Sanstha’s, Karmaveer Bhaurao Patil Mahavidyalaya Pandharpur, 2012.

- “Temperature & humidity monitoring, using PIC 18F877A for greenhouse effect” First International Conference of Physics and Material and Material Based Device Fabrication ICPM-MDF-2012). (Poster), Organized by Department Of Physics, Shivaji University Kolhapur, 416004, 2012

### **SOFTWARE COURSES COMPLETED:**

- C-LANGUAGE CERTIFICATE COURSE COMPLETED.
- C++ CERTIFICATE COURSE COMPLETED.
- ORACLE (SQL/PL-SQL) CERTIFICATE COURSE COMPLETED.
- CCCO AND ADCA CERTIFICATE COURSE COMPLETED.
- MS-CIT CERTIFICATE COURSE COMPLETED.
- WORKING ON PHP, VB.NET LANGUAGES.
- WEB UPLOADING AND METADATA UPLOADING EXPERIENCE.

### **EMBEDED SOFTWARE COURSES:**

- MATLAB SOFTWARE.
- ETAS LABCAR
- MPLAB SOFTWARE.
- XILINX (SPARTEN) SOFTWARE.
- PIC16F877A, DSP3010, AVR (8/16), ARM 2148.
- FPGA SOFTWARE.
- MICRO-C, PINNACLE.
- OSHON SIMULATOR, REAL PIC SIMULATOR, P-SIM, LT-SPICE, TINY-CAD.
- PROTEL SOFTWARE FOR DESIGNING HARDWARE CIRCUIT.
- EAGLE SOFTWARE FOR DESIGNING HARDWARE CIRCUIT.



- PROTEUS FOR DESIGN AND SIMULATION HARDWARE CIRCUIT.
- PSIM FOR SIMULATION HARDWARE CIRCUIT.
- KEIL VERSION FOR ASSEMBLY PROGRAMMING.
- SERIAL COMMUNICATION ON THROUGH PHP, C, MATLAB, USB, WITH HARDWARE CIRCUIT.
- DESIGNING HARDWARE ON CIRCUIT CITY AND LT SPICE, P-SPICE CIRCUIT.
- EAGLE PCB AND SCHEMATIC DESIGN AND DEVELOPMENT.
- TINA TI NATIONAL INSTRUMENTS SOFTWARES FOR SCHEMATIC AND SIMULATION.
- MULTI SIM SIMULATION SOFTWARE FROM NATIONAL INSTRUMENTS.
- LABVIEW GUI DESIGN SOFTWARE FROM NATIONAL INSTRUMENTS.
- EXPERIMENT ENVIRONMENT SOFTWARE FOR ETAS.
- LAB CAR OPERATING SYSTEM FOR ETAS.
- USB TO USB XPULL WIRE SOFTWARE FOR DSO DATA.

### SERVICE EXPERIENCES:

- ONE YEAR INDUSTRIAL PROJECT EXPERIENCE (JOB INFECTION ROBOT) AT **INTEGRATED ENERGY TECHNOLOGY AND NAPL (EMBEDDED DESIGN)** KOLHAPUR, **AUTOMOTIVE**, IN 2011-2012.
- SIX MONTH JOB EXPERIENCE ON PROJECT OF WEB UPLOADING AND METADATA IN **THREDZ IT SOLUTION HYDERABAD, TECHNICAL**, IN 2013-2014.
- CEO AND FOUNDER OF ARS CRASH COURSES FOR ENGINEERING AND DEGREE STUDENTS HYDERABAD, IN 2014-2015.
- **ONE YEAR JOB EXPERIENCE AS ELECTRONIC CIRCUIT DESIGNER AND EMBEDDED SYSTEM PROGRAMMER** AS ASSOCIATE PROFESSOR IN PMV DEGREE AND PG COLLEGE AT KOTI, HYDERABAD, IN 2015-2016
- **ONE YEAR JOB EXPERIENCE AS ELECTRONIC CIRCUIT DESIGNER AND EMBEDDED SYSTEM PROGRAMMER** AS ASSOCIATE PROFESSOR IN ANNIE BESANT WOMENS DEGREE AND PG COLLEGE AT DILSUKHNAGAR, HYDERABAD, IN 2016-2017.
- **4 YEARS AND 5 MONTHS EXPERIENCE IN R & D AS EMBEDDED SYSTEM APPLICATION DEVELOPER AT INNOVATIVE TECHNOLOGIES HYDERABAD, IN 2012 -2017.**

- **PRESENTLY WORKING IN ENDURANCE TECHNOLOGIES LTD (MNC) AUTOMOTIVE, AT R & D, SUSPENSION AS EXECUTIVE MANAGER AT ELECTRONICS LAB (EMBEDDED SYSTEM) AURANGABAD, FROM 16<sup>TH</sup> MAY 2017 TO STILL.**

### **Personal Information**

Name : **Mr. HAJARE AJIT RAMA**

Sex : Male

Marital Status : Married

Languages known : English, Hindi, Marathi and Kannada.

Permanent Address : A/P: Sulkud, Tal: Kagal,  
Dist: Kolhapur.Pin-416217.

Date of Birth : **15-05-1989**

Hobbies : Inventing new projects, Research activity, Reading Books etc.

### **Whom to refer**

Dr.R. K. Kamat  
Department of Electronics, Shivaji University, Kolhapur.  
Mob No. 9028001068  
Email: raj\_kamat@yahoo.com

### **Declaration**

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the correctness of the above-mentioned particulars.

**Yours Sincerely**  
(HAJARE AJIT RAMA)