

**SHIVARAJ K M**

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shivaraj

**CAREER SUMMARY**

An Electronics and Communication student seeking to pursue a carrier in the field of embedded systems and design.

**EDUCATION**

- **Undergraduate (current)**  
B.E (Electronics and Communication) | BMS College of Engineering, Bangalore | Visvesvaraya Technological University | CGPA 9.42 (5th sem) | Passing Year - 2020.
- **Pre-University**  
Vijaya Bifr PU College, R V road Bangalore | NCERT (PCME) | Aggregate 89.16% | Year - 2016.
- **10th SSLC**  
Bangalore Higher Secondary School, R V road Bangalore | State Board | Aggregate 88.64% | Year - 2014.

**PROJECTS**

1. **Maze solver robot with Flood fill Algorithm**  
— Implemented using Atmega 328 Microcontroller, 8 IR array sensor for line detection. It has two parts dryrun and path tracing:
  - (a) In dry it covers all the nodes and get the status of each and every node.
  - (b) After dryrun the algorithm is applied and path tracing starts.
2. **Two wheel Balance Bot**  
— A DMP (Digital Motion Processing) algorithm by InvenSense is used for MPU6050 sensor to get the . Controller used Atmega 328.
3. **Gesture Controlled Robot**  
— It has two parts transmitter(hand) and reciever(Bot):
  - (a) A sensor accelrometer is used in transmitter and based on X and Y value from the sensor direction command is transmitted to bot part.
  - (b) The data received from the transmitter is passed to the controller and command is written to the accuators(motors).
4. **MINI projects**
  1. Smart Parking system using Logic gates.
  2. Portable Function Generator using MULTISIM simulation software.

**INTERNSHIP experience**

- **TATA POWER SED Private limited**  
—Worked on Electromagnetic Interference and Compatability (EMI and EMC).

**TECHNICAL SKILLS**

- **Programming Languages**
  - Proficient:** Embedded C, Python, Verilog
  - Intermediate:** 8051 Assembly language, Java, MATLAB

- **Hardware Knowledge**

Nuvoton 8051 microcontroller, Arduino, Atmega 2560, ARM7, Cortex M3, NodeMCU ESP8266, RF and bluetooth modules.

- **Software Knowledge**

Xilinx Vivado, Cadence Virtuoso, TensorFlow, Matlab and simulink, Multisim, ROS kinetic, Atmel studio, Arduino.

#### Co-curricular activities

1. **1<sup>st</sup> Prize** | National Level Robotics Championship 2018, IIT Kharagpur | Maze solver robot
2. **Workshop on App controlled bot** | Conducted workshop on wireless controlled bot by bluetooth communication | BMS College of Engineering
3. **Robotics competition** | Perfect Machine | Participated in 2016 NITK Surathkal
4. **Huawei Scholarship Award** | For scoring top in ECE department | BMSCE