JIGAR BORAD

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An enthusiastic undergraduate with highly motivated and leadership skills pursuing bachelors of engineering degree in Computer Engineering. Eager to learn new technologies and methodologies. Always willing to innovate the new things, which can improve the existing technology.

EXPERIENCE

2019/11 – 2020-05
IOT TRAINEE, ATOZ INFOWAY LLP

2019/06 – 2019/07
WEB DEVELOPER INTERN, ATOZ INFOWAY LLP

EDUCATION

2016-2020
B.TECH (COMPUTER ENGINEERING), UKA TARSADIA UNIVERSITY
CGPA (TILL 7TH SEMESTER) – 8.89 GPA

2014-2016
HIGHER SECONDARY (11TH-12TH), P.P.SAVANI SCHOOL
PERCENTILE RANK – 91%

SKILLS

- Web Development
- Data Structure
- Software Development
- Problem Solving
- Internet of Things
- Mathematics

ACTIVITIES

- **Participated in Gujarat hackathon (State level)**
  Objective: Automated material handling vehicle
- **Participated in India hackathon (National level)**
  Objective: Goods tacking system
- **Participated in Techfest (College level)**
  Role: worked as coordinator (Volunteer)

PROGRAMMING LANGUAGE KNOWN

- **C**
- **C++**
- **JAVA**
- **PYTHON**
- **HTML**
- **CSS**

CERTIFICATION

- **UDEMY**
  - **INTRODUCTION TO INTERNET OF THINGS AND CLOUD**
  - **CONNECT AND INTERFACE RASPBERRY PI AND ARDUINO**
  - **AWS CERTIFIED SOLUTION ARCHITECT-ASSOCIATE 2018**
- **AWS**
  - **IOT MICROCONTROLLERS: ONBOARDING AN ESP 32 WITH FREERTOS**

PROJECTS

- **SMART WATER TANK MANAGEMENT SYSTEM**

  A SYSTEM WHICH CONSIST TWO WATER LEVEL SENSORS, ARDUINO UNO, SINGLE CHANNEL 5V RELAY MODULE. ONE WATER SENSOR IS PLACED AT THE BOTTOM OF THE WATER TANK AND ANOTHER IS PLACED AT THE TOP OF THE WATER TANK. WHEN BOTTOM WATER SENSOR DOES NOT SENSE WATER THEN IT SENDS THE SIGNAL TO THE ARDUINO AND IT STARTS THE WATER MOTOR. WHEN TOP WATER SENSOR SENSES THE WATER THEN IT SENDS SIGNAL TO THE ARDUINO AND IT SWITCHES OFF THE WATER MOTOR.

- **ACCIDENT DETECTION SYSTEM**

  A SYSTEM THAT CONSIST GSM SIM900A, VIBRATION SENSOR, GAS SENSOR, ACCELEROMETER, GPS MODULE, ARDUINO UNO. THE WHOLE SYSTEM CONTINUOUSLY READS THE DATA FROM SENSORS. WHEN SENSORS READ THE DATA BEYOND THRESHOLD VALUE, IT INTERPRETS THAT ACCIDENT IS OCCURRED. THEREFORE, GSM SIM900A SENDS THE USER BASIC INFORMATION THAT IS SET BY USER TO THE FIRST AID CENTER BY TEXT MESSAGE.

- **LINE FOLLOWER ROBOT VEHICLE**

  A VEHICLE, WHICH IS CONTROLLED BY MICROCONTROLLER ARDUINO UNO. THERE IS A MOTOR SHIELD, WHICH CONTROLS ALL THE MOTORS CONNECTED WITH ITS TIER, AND IR SENSOR SENSES THE BLACK STRIPE ON GROUND AND SENDS SIGNAL TO THE ARDUINO UNO AND IT IS CONNECTED WITH MOTOR SHIELD, IT CONTROLS THE VEHICLE AND FOLLOWS BLACK LINE.

- **HOME AUTOMATION**

  A SYSTEM WHICH HAVE ESP8266 (NODE MCU), N CHANNEL 5V RELAY MODULE AND MOBILE APPLICATION. ESP8266 IS CONNECTED WITH GOOGLE FIREBASE. WHEN WE SELECT THE OPTION FROM MOBILE APPLICATION, IT UPDATES THE VALUES IN FIREBASE AND ESP8266 READS THE VALUE FROM FIREBASE AND TAKE ACTIONS ACCORDING TO THAT READING. AS AN EXAMPLE, IF ESP8266 READ ‘0’ FROM FIREBASE, IT SWITCHES OFF THE FAN.

- **AUTOMATED MATERIAL HANDLING VEHICLE**

  A SYSTEM TO PLACE RIGHT MATERIAL AT RIGHT PLACE AT RIGHT TIME IN INDUSTRIAL ASSEMBLY LINE. SYSTEM MAKES USE OF AGV (AUTOMATE GUIDED VEHICLE). USER CAN SCHEDULE THE AGV TO PICK UP AND DELIVER THE MATERIAL BY REMOTE UI. AGV FOLLOWS THE GENERATION BASE PATH PLANNING APPROACH. WHEN DELIVERY IS SCHEDULED TO ANY AGV, NEURAL NETWORK PLANS PATH FROM PICKUP TO DROP POINT. A BACKEND BUILT ON AWS SERVICES PROVIDES USERS SEAMLESS EXPERIENCE TO INTERACT WITH SYSTEM AND OTA (OVER THE AIR) UPDATES. CLOUD COMPUTING CAPABILITIES EXTENDS THE SUPPORTS FOR REMOTE DEBUGGING OF WHOLE SYSTEM AS WELL AS DATA ANALYSIS OF THE DELIVERIES.

- **WINDOWS DESKTOP APPLICATION**

  A DYNAMIC WINDOWS DATABASE APPLICATION DEVELOPED USING VISUAL STUDIO TO KEEP TRACK OF THE DAILY BUSINESS EXPENSES. THIS SYSTEM IS CAPABLE OF RETRIEVING THE DATA AS PER NEED.

- **SMART PARKING MANAGEMENT SYSTEM**

  A MOBILE APPLICATION IS USED WHILE BOOKING THE PARKING SLOT. AFTER BOOKING HAS BEEN MADE, QRCODE IS GENERATED IN MOBILE APPLICATION. AT THE PARKING PALCE, A FULLY AUTOMATED SYSTEM IS FIXED. WHEN USER SCAN THE QRCODE AT THE ENTARNCE OF THE PARKING, THEY ARE ALLOWED TO ENTER IF QRCODE IS VALID OTHERWISE NOT. SENSORS ARE PLACED IN PARKING AREAS FOR VERIFICATION OF USERS AND TO GET REAL-TIME UPDATES. THE WHOLE SYSTEM IS CONNECTED WITH GOOGLE FIREBASE AND SYSTEM IS TOTALLY UNMANNED. IT WORKS VIA INTERNET. A SYSTEM CONSIST OF RASPBERRY PI, NODEMCU, ULTRASONIC SENSOR, GOOGLE FIREBASE, AND A MOBILE APPLICATION.

- **TEMPERATURE AND HUMIDITY MONITORING SYSTEM**

  A SYSTEM INCLUDES TEMPERATURE SENSOR, HUMIDITY SENSOR AND NODEMCU. NODEMCU IS COONECTED WITH AMAZON IOT CORE AND CONTINOUSLY READ DATA USING SENSOR AND STORED IT IN TO AMAZOM DYNAMODB. WHEN THRESOLD VALUE BECOME FALSE, SPECIFIC USER WILL NOTIFY USING AMAZON SNS SERVICE. THE PROJECT IS USED IN MANUFACUTRING UNIT AS A SAFETY PURPOSE.

- **WATER LOGGING PREDICTION**

  A WEB APPLICATION WITH DEEP NEURAL NETWORK CREATED AND TRAINED WITH KERAS LIBRARY, CAPABLE TO GENERATE ALERT FOR POTENTIAL WATER LOGGING IN AREAS OF SURAT CITY. THE APPLICATION WAS ABLE TO PREDICT THE CRITICALITY OF WATER LOGGING ON DIFFERENT AREAS OF SURAT CITY BASED ON FUTURE RAIN FORECAST.