ANITHA S

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**Career Objective:**

Enthusiastic Embedded Engineer with a strong passion for technology and a proven track record of developing embedded systems solutions. Seeking to contribute expertise in Embedded C programming microcontroller applications, and communication protocols to an innovative technology company.

**Academic Qualification:**

**PG Program In Embedded Software Developer** 2022 - Present

**And Validation for EV Application** - SKILL LYNC

Chennai. | 86%

**M.E (Electronics and Control Engineering)**

Sathyabama University, Chennai. | 7.64 CGPA 2010 - 2012

**M.B.A - HRM**

Pondicherry university- Loyola collage, Chennai. |62% 2008 - 2010

1. **E (Electronics and Control Engineering)**

Sathyabama University, Chennai. | 66% 2004 - 2008

**Keypoints:**

**Embedded C**

**AVR Bare Metal Programming**

**FreeRTOS**

**Communication Protocols: SPI, UART, I2C**

**Microcontrollers- ATmega32, Atmega16, Atmega326**

**Technical Skills:**

|  |  |  |
| --- | --- | --- |
| Programming Languages | : Embedded C, C, AVR BARE METAL PROGRAMMING |  |
| Microcontrollers | : ATmega32, Atmega16, Atmega326 |  |
| IDEs | : STM32CUBE IDE, Microchip Studio IDE,Codeblocks,  Arduino IDE. |  |
| Communication Protocols | : SPI, I2C, UART |  |
| Exposed Standards | : MISRA C |  |
| Operating System | : FreeRTOS |  |

**Professional Experience:**

STEM Mentor | QtPi Private Limited Oct2019 - Mar2020

Robotics Trainer | CPS Global School Nov2018 - Mar2019

Assistant Professor | Jaya Engineering college, Chennai. Apr2012 - Oct2012

Lab Instructor Cum Lecturer | AMET UNIVERSITY, Chennai. Aug2009 - Mar2012

**Projects:**

**Mini Project in B.E: “AUTOMATIC RAIN TIMER”, April- 2007**

* **Hardware Used :** Timer ICNE555, 74LS90 decade Counter, IC74LS47- 7 segment display Driver, LT542 common-anode 7 segment display and a melody generator ICUM66 , wire mesh
* **Description :** Simple rain guage allow to measure the amount of rain(cm/mm) over a period of time, not tell the average rate of the rain had been falling. Unless record the precise timing of its start and ending. The timer that can determine the exact period for whuich rain has fallen and that helps to fibd out the average rainfall rate in conjuction with a rain guage. The timer acts like an automatic stopwatch for recording the duration of rain.

**B.E - “ALIVE HUMAN RADIATION DETECTION USING ROBOTICS”**

* **Hardware Used :** 89c51 Microcontroller, PIR sensor, stepper motor, wireless transmitter and receiver
* **Software Used :** KEIL software
* **Description :** Robotic monitory system which can sense whether a person is alive or not so that immediate help to save the people. Infrared Radiation sensor senses the radiation from an alive human being.The movement of the robot can be controlled through an RF transmitter. Mainly used in warfields and natural disaster like earthquake

1. **E - “A THIRD GENERATION DESIGN FOR THE AUTOMATION OF INTER- NETWORKED BANKING  AND  TELLER  MACHINE  OPERATIONS  USING UNIVERSAL  SUBCRIBER IDENTIFICATION MODULEES USING ARM”**

* **Hardware Used :**ARM7 Microcontroller, GSM Modem, RS232 cable, web camera
* **Software Used :** KEIL C, ORCAD
* **Description :** Implement image- recognition techniques that can provide the important functions required by advanced intelligent automated teller machine, to avoid numerous cards and protect the usage of unauthenticated users

**DESIGN AND DEVELOPMENT OF REAR PARKING SYSTEM**

* **Hardware Used :** ATMEGA328, Ultrasonic Sensor.
* **Software Used :** Microchip Studio IDE, Simul IDE.
* **Description :** Measurement of the distance between the two objects is identified using an ultrasonic sensor which is connected with ATMEGA328 microcontroller. The algorithm for calculating the distance is ported in the microcontroller and the output is analyzed.

**CONTROLLING A DC MOTOR USING PWM AND MONITORING ITS RUNNING STATUS USING ATMEGA32**

* **Hardware Used :** ATMEGA32, DC Motor, Motor Driver, LCD.
* **Software Used :** Microchip Studio IDE, Simul IDE.
* **Description :** Implementing the system for the controlling of the DC Motor using the atmega32 controller, hd44780-54, L293 motor driver and DC motor in the Simul IDE software.Controlling speed of the dc motor can be done by using PWM method. Mainly speed of a motor is directly affected by 3 factors Load, Voltage and Current.Given load we can be maintain a steady speed by using a method called PWM. By varying the width of the pulse applied to the dc motor we can vary  the power applied to the dc motor and increase or decrease the motor speed.Displaying the running status of the DC motor on the hd44780-54 LCD. Weather it is running in clockwise or Anti-clockwise direction or motor is off.

**DEVELOPMENT OF REAL TIME OPERATING SYSTEM of Parking System in EV USING FREERTOS**

* **Hardware Used** : Arduino UNO, Ultrasonic Sensor, Buzzer
* **Software Used** : WOKWI simulator, FreeRTOS API
* **Description** : Measurement of the distance between the two objects is identified using an ultrasonic sensor which is connected with Arduino UNO microcontroller. The algorithm for calculating the distance is ported in the microcontroller and the output is analyzed.

**Creation of user defined data type to implement the user interfaces for working with ‘Set’ (Mathematical Set Theory) using Linked List.**

* In this Project we are going to implement the Mathematical Set Theory by using the two sets of data list and getting the output in  Union and Intersection of two sets.
* ****Set Theory**** means is a  Branch of Mathematical Logic where we learn about the sets.
* ****Intersection of Two Sets**** means we are going to get the output when the common elements are present in two sets.
* Here we are using the Linked List concept for to initialize the two sets of numbers or elements.
* Getting the output in the union form

**LDRA Project:**

Perform unit testing and Integrating testing (Whitebox/ blackbox) with the (C:\\*\*\LDRA\_workarea\Examples\Toolsuite\Cashregister\_5.0\src\userinterface.c) file by creating test cases manually/automatically using TBExtreme and upload the reports. (STUB Management)

**Workshops & Conferences:**

* **“EMBEDDED C WORKSHOP”** On **March 2023** by **Symbiosis Institute of Technology ,Pune**
* Hands-On **Arduino Workshop** on **March 2019**, **Anna University , chennai**
* National Conference on **New Avenues in Sensors and Automation NASA’12** on 15,16th March 2012
* **A 3G design for the ATM operations using Universal Subscriber Identification Modules using ARM** , Sathyabama University.
* National Conference on **emerging trends in automation and control technologies 2011** - **ENACT’11**on 13,14th Sep 2012, Sathyabama university and presented the paper **“FPGA implementation of secret communication”**.
* **Embedded system** seminar,Sathyabama University on Oct. 2010
* **Embedded and Climate changes** Seminar,Sathyabama University on Nov. 2010

**Personal Skills:**

**-** strong problem-solving abilities and analytical thinking.

- Excellent communication and teamwork skills.

-Adaptability and a keenness to learn new technologies.

-Detail-oriented approach to software development.

**Hobbies:** Solving Suduko, Gardening, Painting

**Strengths:**

- Ability to adapt to new changes to continuously upgrade.

- Self – motivated with good communication and interpersonal skills.

- Attitude to work in teams and can lead the team towards the targets.

- Hard worker, Honesty,Positive attitude.

**Languages:**

* **Tamil**: Native Proficiency
* **English**: Professional Proficiency
* **Amharic**(Ethiopian)