ASHUTOSH KUMAR SINGH

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OBJECTIVE:

Recent graduate with a degree in Electronics and Communication Engineering, and a strong foundation in Embedded Systems, Microcontrollers, and C programming. Highly motivated to start a career in Embedded Software and eager to apply my knowledge in this dynamic and challenging environment. To strive hard for a challenging position in a progressive organization using my skills and working towards my professional growth along with the growth of the organization.

Technical Summary:

* Experience on STM32F401RBT6 ARM Cortex M4 Microcontroller
* Experience on Bare metal Programming: UART, SPI, I2C, EEPROM, RTC
* Experience on GDB Debugger and Serial Wire Debugger (ST- Link)
* Experience on Serial Communication Protocols UART, I2C, SPI
* Experience on using Git
* Experience on Inter Process Communication

SKILLS:

Programming Languages: C programming, Embedded C, Linux System programming, Shell Scripting, Basic Data Structures.

Operating System: Linux

Microcontrollers worked on: STM32F401RBT6

IDE’s Worked On: Keil, STM32CubeMx

Protocols: UART, I2C, SPI

Debugging: ST-Link, GNU-GDB

EDUCATION:

Embedded Software Developer Training (March, 2024 – Sep, 2024): Kernel Masters, Hyderabad.

Bharat Sanchar Nigam Limited (BSNL): Internship (June, 2022- July, 2022): Network and Cyber Security, ALTTC Ghaziabad.

B-Tech (Electronics and Communication Engineering) (2019-2023): Galgotia

College of Engineering and Technology, Greater Noida-6.03/10

Intermediate (Maths Physics and Chemistry) (2016-2018):

Little Flower School –74.2%

Secondary School Certificate (2016): Little Flower School- 77.4%

Project 1:

TOPIC: SMART WEATHER MONITORING SYSTEM.

Microcontroller Used: STM32F401RBT6

Development Tools: STM32CubeMX, Keil, Tera Term, Dock light

Description: The purpose of SWMS is to collect data from temperature sensor (LM35) for every 10 sec and the collected data has to be displayed on 16x2 monochrome LCD along with time using RTC (DS1307). Time is updated on the display for every second. Whenever Internet is available on Wi-fi module (ESP8266), the temperature has to update for every 10 sec, and if no Internet is available, we have to store the data in EEPROM (a non-volatile memory). The above operation is divided into 5 tasks and then implemented.

Role & Responsibilities:

* Understanding the Datasheet and Reference Manuals of Controllers and Sensors.
* Connecting the sensors individually building them as libraries ● Combined all libraries together to form a project.
* Debugging the problems occurred during the project.

Project 2:

TOPIC: META SURFACE INSPIRED MIMO ANTENNA FOR UWB APPLICATIONS.

Description: In this project, we exploited the unique properties of meta surfaces to achieve certain antenna characteristics such as compact design, bandwidth enhancement, cross polarization control etc. The principles behind meta-surface inspired MIMO antenna involved leveraging the unique capabilities of meta-surfaces to control and manipulate electromagnetic waves. This further lead to antennas with improved performance in terms of compactness, bandwidth, beam steering and interference mitigation.

Declaration:

I Ashutosh, do hereby confirm that the information given above is true to the best of my knowledge.

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