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Objective

I am looking for a challenging job with a rapidly growing organization that can help me leverage my knowledge, technical skills and provide an environment which encourages me to succeed and grow professionally where I can continue to learn, utilize and sharpen my skills while adding value to the organization.

Experience

- **UST Global** 7-9-2021 - Present
Software developer
 - Assisted in the design and Implementation of embedded systems projects including writing and debugging code for microcontrollers and implementing communication protocols.
 - Implemented a compact portable data logger using PIC16F877A, DHT11 and BMP280 sensors for environmental monitoring in rugged conditions.
 - Worked on sensors and other basic I/O peripherals, configuring ADCS and calibration for accurate data capture.
 - Conducted unit testing and integration testing to ensure system functionality, utilized oscilloscopes and logic analyzers to diagnose and solve hardware and software issues.
 - Optimized code for memory and power efficiency ensuring high performance for critical applications.
 - Created technical documentation regarding the proposed solutions.
 - Worked with cross-functional Team to understand system requirements and hardware compatibility with software designs.
 - Developed a Data Validation tool for ETL and DWH migration projects, leveraging technologies including PySpark, SQL, Trino, PostgreSQL, Jupyter Notebook, Snowflake, and Python.
 - Migrated and validated data from PostgreSQL to Hive for the VMware Next Gen Analytics project, converting complex SQL queries into HQL and ensuring seamless integration with the new data warehouse architecture.
 - Dashboard creation & RLS implementation in Power BI.
 - Automating existing Power BI reports using inbuilt tools.

Projects

- **Data Migration Projects**
 - Migrated and validated data from PostgreSQL to Hive for the VMware Next GenAnalytics project, converting complex SQL queries into HQL and ensuring seamless integration with the new data warehouse architecture.
 - migration of data from Hadoop to GCP for Walmart, utilizing the UDP & CIA framework.
 - Demonstrated strong expertise in Hadoop, GCP, and Unix, ensuring data integrity and consistency throughout the migration and validation process.
- **Compact Portable Data Logger**
Designed a data logger for real-time environmental monitoring using PIC16F877A, integrating sensors for temperature, humidity, altitude and pressure data.
 - Configured ADC channels for capturing & storing analog voltage data with precise timestamping via RTC, allowing for external sensor calibration and interfaced 20*4 LCD for real-time display with UART data transfer to a GUI interface.
- **IoT enabled system for theft and fault detection**
 - Led a team to design and developed a system using ACS712 current sensor, Arduino Uno R3, GSM for real time fault and theft detection in single phase LT lines, minimizing losses, preventing electricity thefts and manual interventions.
 - Integrated relay protection for connected loads to enhance operational safety.

- **Micro project on fire alarm and various other circuits.**

Successfully implemented a fire alarm circuit and other circuits like mosquito repellent circuits.

Internships

- **KELTRON, Ernakulam**

Completed internship on Embedded Systems and Arduino programming conducted by KELTRON during the month of July 2019.

- **BSNL, Ernakulam**

Completed in-plant training on Telecom technologies conducted by BSNL for two weeks during July 2018.

Certifications

- **Introduction to Embedded System Design**

Online learning platform : NPTEL

Duration : 12 Weeks

- **Building Arduino robots and devices**

Online learning platform : Coursera

Duration : 6 Weeks

- **Introduction to Industry 4.0 and Industrial IOT**

Online learning platform : NPTEL

Duration : 12 Weeks

Skills

- C Programming
- Embedded Systems
- Microcontrollers
- SPI, I2C, UART
- Basic electronics
- Digital Electronics, Analog Circuits
- BUCK, BOOST, LDO
- Arduino, Proteus, PSPICE
- Debugging, Schematic reading
- Linux commands, RTOS, UNIX, Bash
- Problem Solving, Communication, Leadership, Decision making, Adaptability

Trainings

- **Training on Embedded Development using PIC16F877A, STM32F103C6**

Hands-on training in embedded systems using PIC16F877A, STM32F103C6 with a focus on peripheral interfacing, communication protocols like UART, I2C, SPI and system simulation using Proteus.

- **PCB Design workshop**

Two day workshop on PCB design, assembly and soldering using digital technology conducted by R.R Digital Consultants & Trainers.

- **Basics of Prototyping**

Workshop on basic procedures involved in prototyping of any product, conducted by IEEE SB ASIET.

SOFTWARES USED

- Proteus, MPLAB, PSPICE, STM32Cube
- Tinkercad, MATLAB, MySQL, Power BI
- GitHub, MS SQL, MS Word, MS PowerPoint

Education

- **APJ Abdul Kalam Technological University, Kerala**

Bachelor of Technology in Electronics & Communication Engineering
CGPA - 7.42

2017 to 2021

Professional Organizations

- Institution of Electronics and Telecommunication Engineers (IETE)
- Institution of Engineers (India)