Durjoy Talukder

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Website: https://durjoytalukder16.github.io/Durjoy-Talukder-Portfolio/

Specialization

- Industrial Process Automation
- Schematic Capture & PCB design
- Microcontroller Firmware Development

Technical Skills

Programmable Logic Controllers

- Siemens
  - Logo, S7 1200

SCADA software

- VT-SCADA

Other Industrial devices

- Controlling VDF and Stepper drivers.
- Experienced in working with multifunction energy meters.
- Interfacing a wide range of industrial sensors.

Microcontroller

- STMicroelectronics
  - STM32F4 Series
  - STM32L4 Series
  - STM32G0 Series
- Microchip
  - ATMEGA32, ATMEGA328p etc.
  - Attiny 48, Attiny 13 etc.
- Espressif
  - ESP32, ESP8266 etc.

Circuit Simulation

- Proteus
- Simulink

PCB Design

- EasyEDA
- Proteus
- Altium

Algorithm Development

- Octave
- MATLAB

IDE

- Keil µ Vision
- Microchip Studio
- Arduino

Others

- 2D / 3D modeling using AutoCAD
- Microsoft office (Word, Excel, Power Point).

Job Experience

- **Associate Engineer (R&D)**
  Think Limited
  July 2022 to Present
  Responsibilities:
  1. Designing and developing hardware systems
  2. Developing and Coding Firmware
  3. Analyzing and troubleshooting hardware firmware issues
  4. Testing and evaluating hardware and Firmware systems
  5. Researching new technologies
  6. Documenting designs and processes

- **Jr. Design Engineer (R&D)**
  Think Limited
  October 2021 to July 2022
  Responsibilities:
  1. Develop hardware solutions based on the project requirements.
  2. Design the layout of printed circuit boards (PCBs) to accommodate hardware components.
  3. Create comprehensive documentation for hardware
  4. designs, electrical schematics, and PCB layouts.
  5. Select appropriate components and technologies for hardware implementation.
  6. Create electrical schematics illustrating the interconnection of components.

- **Embedded System Trainer**
  THiNK Limited
  December 2023 to June 2024

Education

Bachelor of Science in Engineering
Department of Electrical & Electronic Engineering, American International University-Bangladesh.
Year of passing: 2021
Higher Secondary Certificate, Chittagong.
CDA Public School and College.
Year of passing: 2016

Academic projects

- Automated Water Level Detect System
- Smart Security System.
- Automated Line Following Robot
- Arduino-based Smart Automatic Hydroponics System

Industrial Grade Projects:

- Designing Variable Frequency Drive (VFD) for driving the induction motor of a Vane-type fuel pump. These pumps deliver fuel from a locomotive storage tank to a locomotive engine.
    - Control Mechanism: Liner (Volts/Hz)
    - Input Voltage: 56 to 100 Volt DC (locomotive application).
    - Output Voltage: 0 to 48 volts (line to line)
    - Output Frequency: 0.1 to 60 Hz
    - Features: Timed acceleration or deceleration, forward or reversing, over and under voltage trip, overcurrent trip, automatic Restart.
    - All parameters are programmable by Windows software through USB.

- Wireless Water Meter Monitoring System: 4-20mA input & SIM Module
    - Input Voltage: 24VDC
    - Communication Port: RS485, 4-20mA Analog Input, Digital Output
    - Communication Protocol: Modbus RTU
    - Communication Module: Sim Module
    - Feature: Automated Billing System, Water Quality and Fault Detection and Real-Time Monitoring.
- Industrial Gateway Design:
    - Input Voltage: 12V to 24V DC.
    - Communication Port: RS485
    - Communication Protocol: Modbus RTU and Modbus TCP.
    - Communication Module: Sim Module, Ethernet Module and Wi-Fi Module.
    - Flash Memory: 256KB external Flash
    - Feature: Gateway Configurable Software, Data storage Capability, Changeable Communication Module.
- PORTABLE GENERATOR MONITORINGSYSTEM
- BANGLADESH ARMY SIMULATION-BASED PROJECT VERSION 1
- BANGLADESH ARMY SIMULATION BASED PROJECT using Logo PLC version 2.

Reference

- Dr. Md. Saniat Rahman Zishan
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