Imtiaz Ahmed

B-103, Phase#2, Gulshan - e – Hadeed, Karachi
03052349829
ahmedimtiazf96@gmail.com
Gender: Male | Date of birth 10/12/2001 | Nationality | Pakistani

SUMMARY

An Electronics Engineering graduate with expertise in various facets of the field including industrial electronics, instrumentation, electronic circuit design, electrical machines, power electronics, control systems, and signal systems. Possessing strong theoretical knowledge combined with practical skills, I am well-equipped to contribute effectively in dynamic engineering environments. Seeking a Graduate Trainee Engineer position at Engro Corporation to leverage my knowledge and skills in a professional setting while furthering my career development and contributing to organizational objectives.

WORK EXPERIENCE

Internship

continental biscuits limited [15/06/2023 – 30/07/2023]

- Engaged in control circuitry tasks.
- Utilized Variable Frequency Drives (VFD) for motor control.
    a) Worked with VFDs from LS Electric, Danfoss, and Siemens.
    b) Engaged in motor control using LS Electric VFDs.
    c) Implemented VFD solutions from Danfoss for specific applications.
    d) Utilized Siemens VFDs for motor speed control and automation tasks.
- Implemented timer circuits for various operations.
- Conducted fault detection activities.
- Employed relay timer circuits for different operations.
- Utilized PID temperature controllers for precise temperature regulation.
- Contributed to the development of a Cuts Per Minute (CPM) RPM (Rotations Per Minute) counter project.

a) Real-time CPM (cuts per minute) and RPM (rotations per minute) readings are displayed on the LCD screen.
b) Practical tool for diverse applications, including monitoring roller speed and biscuit production.
c) g. The IR sensor, LCD display, and Arduino are interconnected.
d) Our team developed programming logic to configure the microcontroller.
e) The counter refreshes at one-minute intervals, ensuring up-to-date and accurate readings.

- Executed control panel wiring, utilizing Single Line Diagrams (SLD) as provided.

EDUCATION AND TRAINING

2020-2024	**Bachelor of Electrical Engineering (Electronics)**
Institute	**Sukkur IBA University** https://www.iba-suk.edu.pk
2018-2020	**Intermediate Education**
Institute	**Mari Petroleum Higher Secondary School, Daharki**

RELATED SKILLS

- LabVIEW
- EKTS
- NI MultiSim
- MATLAB/Simulink
- AutoCAD and SolidWorks
- Logo soft
- Siemens TIA Portal V14
- SketchUp 3D sketching software
- NI Elvis
- VFD (Variable Frequency Drive)
- EAGLE PCB design
- EDA Playground
- IceStudio
- Raspberry Pi 4
- ESP-32
- Visual Studio Code
- PCB design EasyEDA
- MyRio
- C
- C++
- Python
- Arduino
- HTML
- Java
- Schematic PLC
- Control panel wiring.
- Vivado VHDL

PROJECTS

Automated Vision System for Fabric Defect Detection
[01/09/2023 – Current]

- Develop an automated vision system using machine learning algorithms to enhance product quality and minimize manual labor.
- Project objectives encompass creating image processing algorithms, assessing system performance, optimizing processes, and enhancing quality control.
- Project plan involves several stages:
  a) Data collection.
  b) Model design and implementation.
  c) Training and optimization.
  d) Evaluation and fine-tuning.
  e) Deployment and testing.
  f) Performance analysis.

Controlling Robot Using Accelerometer
[06/11/2023 – 14/11/2023]

- Developed a mobile robot control system using an accelerometer.
- Connected a mobile phone to an ESP-32 for integration.
- Programmed the system to execute specific actions in response to tilting gestures.

CPM and RPM Counter
[15/06/2023 – 30/07/2023]

- Real-time CPM (cuts per minute) and RPM (rotations per minute) readings are displayed on the LCD screen.
- Practical tool for diverse applications, including monitoring roller speed and biscuit production.
- The IR sensor, LCD display, and Arduino are interconnected.
- Our team developed programming logic to configure the microcontroller.
- The counter refreshes at one-minute intervals, ensuring up-to-date and accurate readings.

Signal Smoothing Using Moving Filter and Savitzky–Golay filter in MATLAB
[15/07/2022 – 31/12/2022]

- Smoothing is a signal processing technique designed to eliminate noise from signals.
- The moving average filter calculates the average to yield smoother results by reducing noise.
- A Savitzky–Golay filter is a digital filter employed for smoothing digital data points.

Digital Multimeter

[01/01/2022 – 01/05/2022]

- Digital Multimeter measures values of electrical components such as resistors, capacitors, inductors, voltage, and current.
- Widely utilized in electrical engineering programs for its versatility.
- Chose this project to gain insights into the backend workings of a multimeter.
- Designed the multimeter PCB using EAGLE software.
- Created a 3D model using SolidWorks.
- Employed the Atmega 328 microprocessor and programmed it using Arduino IDE software.

Line Follow Robot

[10/07/2021 – 30/12/2021]

- Successfully finished a line-following robot project emphasizing accuracy and error reduction.
- Employed the PID technique for precise control.
- Chose Arduino UNO as the microcontroller and programmed it using Arduino IDE.
- Integrated IR sensors, ultrasonic sensors, and an H-bridge for efficient motor control.