

# Author Declaration

This library was developed as part of a Final Year Project (FYP) by a team of Electrical Engineering students from NED University of Engineering and Technology, graduating in 2025.

## Project Title:

Advanced Server-Based NILM System for Optimized Energy Monitoring in Large Residential Consumer Networks

The project was completed under the supervision of Mr. Hassan ul Haq, Assistant Professor, Department of Electrical Engineering, NED University.

## Purpose of This Library

The MCP3903 Arduino Library was created to:

- Interface with the MCP3903 6-channel ADC
- Perform synchronized, high-resolution sampling of voltage and current signals
- Enable real-time appliance-level energy disaggregation
- Serve as a reusable module for energy monitoring systems in NILM (Non-Intrusive Load Monitoring) applications
- Be open-source for the academic and developer community working in smart metering and embedded analytics

## Project Team

- **Usama Mohsin** (*Lead Developer – MCP3903 Library*)  
B.E. Electrical Engineering, Batch 2021–2025  
[engosamamohsin@gmail.com](mailto:engosamamohsin@gmail.com)
- **Aisha Subha Ansari**  
B.E. Electrical Engineering, Batch 2021–2025
- **Syed Abshar Ali**  
B.E. Electrical Engineering, Batch 2021–2025
- **Sourah Yousuf**  
B.E. Electrical Engineering, Batch 2021–2025

## Supervisor

**Mr. Hassan ul Haq**

Assistant Professor

Department of Electrical Engineering

NED University of Engineering and Technology