

Abdelrahman Elawady

Madinah, Saudi Arabia | +966544776316 | 4413746@upm.edu.sa | www.linkedin.com/in/abdelrahmanelawady

Education

University of Prince Muqrin UPM
• B.Sc. in Electrical Engineering

Madinah, Saudi Arabia
Sep 2023 - Expected 2027

Experience

Summer training intern

Jun 2025 - Present

Jabal Al-Alam company JAA (Delta Controls partner) - Madinah, Saudi Arabia

- Assembled and configured BMS classic control electrical panels and developed I/O lists in Excel for GRMS and BMS applications, ensuring accurate mapping and efficient system configuration.
- Programmed building automation controllers using GCL+, and configured database software objects via BACnet, MS/TP, Modbus, Linknet and Ethernet/IP network protocols.
- Assisted in testing, commissioning, and troubleshooting of BMS field devices and panels (MCCs, DDCs, AHUs, Chillers, pumps), and created AutoCAD layouts and real-time monitoring graphics.

Academic projects

Sophomore Ionic Plasma Thruster project

May 2025

- Engineered a fuel-less ionic propulsion system using high-voltage corona discharge and plasma wind, leading the team to win 1st place in the UPM's All-Classes Electrical Engineering Competition.
- Designed and implemented a ZVS flyback driver circuit and voltage multiplier, achieving efficient high-voltage AC generation and enabling a fully functional, 3D-printed prototype with zero moving parts.

Smart LED Display Systems for Campus Offices

Nov 2024 - Feb 2025

- Designed and implemented Bluetooth-enabled LED display systems for the Dean's Office and Career Center using ESP32 microcontrollers, optimizing RAM, DMA and flash memory, & integrating UART serial communication.
- Developed custom web app and engineered cost-effective solutions that reduced implementation costs by approximately 75% compared to commercial alternatives with low maintenance for professional environments.

Freshman physics competition project - 2nd place

May 2024

- Collaborated with a colleague in a trial-and-error approach to design and assemble a low-budget DIY axial flux electric generator using 250-loop coils and magnets mounted on a CD disk, resulting in 3V output.

Freshman signal analysis MATLAB project

May 2024

- Worked with a team designing and developing signal processing software that takes user-input, simulates adding noise to a signal, filters it with statistical algorithms & displays results on a graph for data visualization.

Research projects

Co-author researcher - AIUla Heritage and Tourism Research

Jun 2025

- Co-authored and reviewed a research paper published in Q2 GeoJournal (Springer Nature), exploring AIUla region in Saudi Arabia, with a focus on literature review and data collection.

Independent Programming projects

JavaScript to-do-list app

Jun 2023

- Programmed a JavaScript to-do-list web app that stores and retrieves data locally on the browser.

Python Interactive covid-19 data visualization map

Jun 2021

- Developed an online interactive Covid-19 data map using python folium library and HTML I-frames.

Skills, Technologies & Interests

Skills & Technologies: MS (word, excel, PowerPoint), C++, Python, MATLAB, AutoCAD, Multisim, HTML, JavaScript.

Interests: creative scripts, scenarios, & content writing; Tutoring; graphic design on Canva

Leadership & Volunteering

- Electrical Engineering (ExZistence) club leader - UPM Feb 2025 - Present
- 100+ hrs. Volunteering in various events and clubs including google developer student club (GDSC).