

Basel Elsayed

Nationality: Egyptian **Date of birth:** 20/05/1994 **Gender:** Male **Phone number:** (+20) 1063082049

Email address: basel.mokhtar@icloud.com

LinkedIn: <https://www.linkedin.com/in/baselm11/>

Website: <https://baselm11.github.io/>

Home: El 5000 Units Building 124, 42513 Portsaid (Egypt)

ABOUT ME

Skilled electrical engineer with a passion for data science and scientific research. In addition, I have a strong background in data science, data analysis, and programming. With a creative mindset and ambitious goals, I aspire to integrate electrical engineering with AI technologies for a better future.

EDUCATION AND TRAINING

Bachelor of Engineering

Portsaid University [20/09/2012 – 16/07/2017]

City: Portsaid | **Country:** Egypt | **Website:** <https://psu.edu.eg> | **Field(s) of study:** Engineering, manufacturing and construction: • Electricity and energy | **Final grade:** Very Good with Honor "80.4%, Ranked "9"

WORK EXPERIENCE

Electrical engineer

El Sweedy Technical Academy [15/09/2023 – Current]

City: Portsaid | **Country:** Egypt | **Website:** <https://www.sta.edu.eg/> | **Name of unit or department:** Technical Training - **Business or sector:** Education

- Teaching students theoretical concepts, including electrical circuits, systems, machines, equipment, and safety regulations.
- Conducting practical sessions in the electrical laboratory, training students to work with electrical equipment, transformers, motors, earthing, classic control circuits, and PLC.
- Applying acquired skills through job-based learning by accompanying students on factory visits, where they engage in industrial processes.
- Providing professional training to factory workers as a part of collaborations with local factories through formal agreements with Elsewedy Technical Academy.
- Participating in admission tests for potential trainers, assessing their technical skills and eligibility for the training program.

Inspection engineer

General Organization for Export and Import Control (GOEIC) [30/06/2020 – 15/09/2023]

City: Portsaid | **Country:** Egypt | **Website:** <https://www.goeic.gov.eg/en>

- Performed accurate testing of imported batteries according to international standards.
- Conducted a variety of electrical tests, including charge/discharge cycles and capacity assessments under controlled environmental conditions such as temperature, to evaluate battery quality.
- Ensured compliance with international regulations for battery safety and quality.
- Carried out inspections on imported and exported products in line with international regulations and industry standards.
- Prepared and maintained detailed reports on inspection processes and findings for documentation.
- Took samples of imported products and sent them to the laboratories for quality and safety testing.
- Held the role of quality specialist in my department, to ensure compliance with ISO 9001 standards.

Data analyst

Freelance [12/04/2022 – Current]

City: Portsaid | Country: Egypt | Website: <https://baselm11.github.io/>

- Creating interactive dashboards remotely for clients to visualize their data and provide key insights using Excel, Tableau, and Power BI.
- Preprocessing and analyzing the clients' data to exclude outliers and to identify trends, patterns, and potential opportunities.
- Performing time series forecasting tasks using statistical models such as ARIMA, as well as deep neural networks, including LSTM.

CONFERENCES AND SEMINARS

[19/12/2023 – 21/12/2023] Mansoura University - Egypt

International Middle East Power Systems Conference (MEPCON)

- Presented a published paper titled “Novel Short Electric Load Forecasting Approach Using a Multivariate Transformer Neural Network and CEEMDAN”
- DOI: 10.1109/MEPCON58725.2023.10462386.

Link: <https://mepcon2023.mans.edu.eg/>

PUBLICATIONS

[2023]

A Novel Short Electric Load Forecasting Approach Using a Multivariate Transformer Neural Network and CEEMDAN

- Published in 24th International Middle East Power Systems Conference (MEPCON 2023)
- DOI: 10.1109/MEPCON58725.2023.10462386
- Cited by: [Papers \(1\)](#)

PROJECTS

[15/08/2023 – Current]

Day-ahead Techno-Economic Market Scheduling for Virtual Power Plants (VPPs)

- This project optimizes the performance of VPPs by integrating Electric Vehicles and Battery Energy Storage for revenue generation and grid support.
- Forecasted day-ahead model parameters using advanced decomposition techniques, such as CEEMDAN, and built a prediction model using neural networks, including LSTM, CNN, and Transformer neural networks.
- Coded the VPP model using Python, utilizing various libraries, including Pyomo, Pandas, Numpy, and Matplotlib.

CREATIVE WORKS

[02/03/2023 – 27/11/2024]

LED Control using Artificial Intelligence

As I supervised a team of students, my team participated in a national competition for young entrepreneurs. The competition aimed at building young entrepreneurs and addressing environmental challenges. Our team developed a prototype using a laptop to run AI algorithms (Human Activity Recognition) in Python, a camera to capture human motion, and an arduino to control small LEDs. As this creative project aimed at saving energy through limiting LEDs' brightness and adjusting it for the current activity. In the next phase, my team of young students built their first Business Model Canvas and presented the full project to the referees. However, due to cyber security issues, the

project only reached the semi-finals. From my perspective, I think this project needed more testing, as it might cause strain to human eyes.

LANGUAGE SKILLS

Mother tongue(s): Arabic

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Software skills

SQL and MS-SQL / C,C++,Python,Arduino / Data Visualization (Tableau, Power BI)

Technical skills

Classic control & PLC / Data Science | Data Collection, Data Processing, Data Analysis, Data Visualisation / Forecasting Methods / descriptive statistics with excel / Machine Learning, NLP / AI, Deep Learning