

Mohamed Reda Mamdouh

Electrical Power & Machines Engineer

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Professional Summary

Electrical Power Engineering student specializing in the field of power distribution, with a solid academic background in the design and analysis of electrical distribution systems. Freelance experience includes complete electrical design for a residential villa, covering load calculations, SLD, lighting & power layout, low-current systems, earthing, cable tray design, and HVAC coordination. Worked as Course Coordinator for the "Power Distribution" course with Eng. Mohamed Emam, and as Course Instructor for the same course at ZigZag. An active member of IEEE, participating in professional workshops and technical activities. Developing structured problem-solving, teamwork, and competitive engineering skills.

Education

Bachelor of Electrical Power & Machines Engineering

Zagazig University

Graduation: October 2027

GPA: Above 3 (Very Good)

Professional experience

Team Leader – Power Distribution Course, ZigZag Team

Octo 2026 – Present

Led and instructed a team of 20 members in power distribution fundamentals, covering lighting systems, power systems, and Single Line Diagrams (SLD), while simplifying complex concepts into practical, easy-to-understand sessions.

Site Visit – Distribution Infrastructure

Sep 2025

- Gained hands-on exposure to key power distribution components through an on-site visit, including Ring Main Units (RMU), Transformers, Cables, Distribution Boards, and Busways, gaining practical insight into the installation, layout, and integration of real-world distribution systems, and how these components function together within a complete power distribution network.

Electrical Transmission Training – EETC (1 week, Excellent)

2025

- Hands-on training at 220kV substations covering transformers, switchgear, protection systems, SCADA/RTU, grid operations, HSE, and project management.

Freelance Electrical Engineer – Villa Electrical Design Project

2026

- Designed the complete electrical system for a residential villa, including load calculations, Single Line Diagrams (SLD), distribution board layouts, lighting and power systems, light current (LC) systems, protection devices (CBs, MCCBs), earthing system, and cable tray routing, and HVAC requirements.
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Technical Skills

- **Electrical Power Systems & Distribution:** MV/LV Distribution, Transformers, RMU, ATS, Load Flow & Load Calculation, Power Distribution Design
 - **Lighting & Electrical Design:** DIALux evo Lighting Simulation, Lighting Layout Design, Electrical Building Services, Panel Schedule, Power, SLD, HVAC, Voltage Drop & Short Circuit, lightning, Earthing and Cable Tray.
 - **Lighting Current Systems:** Fire Alarm, CCTV, Access Control, BMS, Sound System, Nurse Call, Data & Telephone Networks.
 - **Shop Drawing**
 - **Design by Revit**
 - **Engineering Tools & Software:** Revit ,AutoCAD, DIALux evo, Ecodial, ETAP and Microsoft
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Transferable Skills

- Leadership and team management
 - Strong communication and presentation skills
 - Technical training and mentoring
 - Project coordination and execution
 - Problem-solving and analytical thinking
 - Time management and multitasking
 - Attention to detail
 - Adaptability and continuous learning
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Language

Arabic (Native) | English (Good)