

MUDASSAR NAWAZ

ELECTRICAL ENGINEER (GPU)

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CAREER SUMMARY

Electrical Engineer specializing in power systems with 10+ years' experience optimizing for defense sectors including RSAF and UAE Armed Forces. Expert in motor/generator diagnostics, and power distribution troubleshooting. Resolve electrical interruptions and power distribution faults proactively, reducing downtime by 40% and repair costs by 25%.

EXPERTISE

Generator | Motors | Pump | PLC VFDs, UPS, Control Panels | Hardware Installation & maintenance | LV System | ABB EMAX2 series & Siemens NXAIR Switchgears and Sivacon S8

TECHNICAL SKILLS

Self-healing GRID systems | Automation | Power analysis tools ETAP, SKM | Power & Control Systems | BOQs | Data analysis | Xilinx (FPGA) | MATLAB | STM32 | Arduino R3 | Autodesk for AutoCAD MEP | Strong grasp of electrical engineering techniques and principles | Microsoft Office Word, Excel, Access, VBA

PROFESSIONAL EXPERIENCE

INDUSTRIAL ELECTRICAL ENGINEER | GDC Middle East | Jeddah, Saudi Arabia

Feb 2022 – Present

Project (Technical Support Program with Royal Saudi Air Force)

- **Implemented predictive maintenance programs** for 90–180 kVA GPUs using IoT sensors (vibration, thermal) and **Fluke Scope meters**, reducing unplanned downtime by **45%**.
- Overhauled 28V DC / 115V AC 400Hz GPU fleets (Hobart GPP-180A/TLD PXE-120) for RSAF C-130H fleet, maintaining 99.4% operational readiness.
- Cut MTTR by 40% via AI-driven fault prediction and modular PCB repair stations.
- **Performed quarterly calibration** of voltage regulators ($\pm 1\%$ tolerance per **MIL-STD-704F**) and **400 Hz inverters**, ensuring 99.8% power quality compliance.
- **Overhauled PCB assemblies** (control boards, gate drivers) for Hobart GPP-180A/TLD PXE-120 GPUs, extending service life by **3+ years**.
- Achieved 100% on-time task completion, supporting a clean, safe, and efficient work environment.

SENIOR INDUSTRIAL ELECTRICAL TECHNICIAN | Saudia Technic | Jeddah, Saudi Arabia

Nov 2018 – Feb 2022

Project (Technical Support Program with Royal Saudi Air Force)

- Specialized skills and knowledge in repairing and maintaining equipment and machinery used in industrial settings.

- Maintained, maintenance, troubleshooting and diagnosed complex industrial electrical systems, including Ground Power Units (GPUs), for Air Base power plant, Generator, Motors, Battery Charger, PT & CT, control panels and ensuring safety and operational reliability.
- Diagnosed performance issues, coordinated system upgrades, and maintained industrial machinery to meet operational standards.

SITE ELECTRICAL ENGINEER | Aqua Dynamic LLC | Abu Dhabi, UAE

July 2016 – October 2018

Project (Generation and Maintenance MEP Project with Armed Forces of UAE)

- Installation experience in Siemens T-3000, PLC & VFD SIMATIC-S5 / S7, Fire Fighting and Advance Control Equipment.
- Managed maintenance schedules, supervised technical teams, and supported MEP equipment testing and commissioning of Reverse Osmosis RO plant.
- Experienced in carrying out major shutdown support, project work and preventive and corrective maintenance activities for power plant equipment's.

ELECTRICAL SUPERVISOR | Power Supply Management Workshop | Pakistan

July 2014 – June 2016

Project (Residential & Commercial Work)

- Assisted in the installation and maintenance of residential and commercial solar panel systems.
- Conducted basic electrical checks and supported the setup of wiring, inverters, and mounting structures.
- Maintain detailed records of service activities and prepare comprehensive installation records and reports.

EDUCATION

Bachelor of Science | Electrical Engineering | The University of Lahore | Pakistan 2010 – 2014

Diploma of Associate | Electrical Technology | Swedish Institute of Technology | Pakistan 2007 – 2010

PROFESSIONAL CERTIFICATIONS

Emergency Lighting Central Battery System | Saudi Council of Engineers | Saudi Arabia 2025

Solar Thermal Technologies | Saudi Council of Engineers | Saudi Arabia 2025

Aircraft Electrical System | Arabian Education & Training Group | Saudi Arabia 2023

Diploma of Automobile Technician | Fuji Foundation Institute of Technology | Pakistan 2009

MEMBERSHIP

Tech 599251 | Electrical | Saudi Council of Engineers | Saudi Arabia 2018 – Present

Elect 46230 | Electrical Engineering | Pakistan Engineers Council | Pakistan 2014 – Present

CORE PROJECTS

Radar Simulation on MATLAB | Numeric Relay in MATLAB | Automatic Car Washer | Protection of Motor with Arduino (Tinker cad) | Vending Machine STM32 | POS Dashboard with Microsoft Office Power BI & Access

ACHIEVEMENT

Best Performer Awards Royal Saudi Air Force (RSAF)