



# MUSTAFA ELTIGANI IBRAHIM MOHAMMED

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Date of birth: 8 Aug 1993 | **Nationality:** Sudanese | **Gender:** Male |

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Delhi Technological University, Bawana Rd, Shahbad Daulatpur Village, Rohini, New Delhi, India, 11004, 11004, Delhi, India

## WORK EXPERIENCE

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20 APR 2018 – 31 DEC 2020 – Elfasher, Sudan

### **ELECTRICAL ENGINEER – KONI ENERGY CO.LTD**

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- Design, the configuration of MV Power Generation, control.
- Drawing circuit diagram of power system equipment for power plant
- Design layout of power system station
- Management power system project in Sudan
- Analysis and optimize power system operation issues
- Manage power system MV generator and transformer

9 FEB 2017 – 10 DEC 2017 – Khartoum, Sudan

### **POWER SYSTEM PROTECTION ENGINEER – SUDANESE THERMAL POWER GENERATION CO.LTD**

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- Protection system coordination and settings calculation for the whole national power grid.
- Handling daily events on the network. Analyzing faults and protection trips and solving problems.
- Testing and commissioning of power plants and substations (generators, power transformer, switchgear) with voltage levels: 220kv, 110kv, 33kv, and 11kv.
- Testing and commissioning of generation substations (power transformer, switchgear) diesel power plants (out of grid) 33/11KV
- Testing and commissioning of high voltage switchgear CT, VT, CB (220kv, 110kv, 33kv, 11kv, 6.6kv and low voltages).
- Sorting out the punch points of electrical equipment during and after erecting based on the contract, safety requirements, and relative standards
- Reviewing of technical specifications for new generators projects.
- Performing network protection studies using ETAP analysis tool.
- Performing protection system maintenance (corrective and preventive), for different voltage levels.
- Skills in operation of static and digital relays. Human man interface and knowledge to communicate to relays by manual and computer operated software
- methods to change the operating settings according to systems requirements.

1 FEB 2016 – 1 FEB 2017 – Elfasher, Sudan

### **ELECTRICAL SYSTEMS ENGINEER – SUDANESE THERMAL POWER GENERATION CO.LTD**

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- Design small, medium and large, PV-Plant projects with or without Grid connection with the Software Sunny Design Web SMA.
- Installs, repairs, and tests electrical equipment to maintain electrical power in buildings and structures, detect shortcuts and defective connections, and restores operation of non-functioning equipment.
- Installation of implementation Hybrid Energy System with SMA Equipment
- Commission and decommission a medium PV- Plants (50 to 500 kW).
- Diagnosing operational issues and troubleshooting, performing complex wiring installations, Repairing, test, troubleshoot, inspecting; and installing, remove and maintaining solar site equipment such as solar panels, inverters, transformers, breakers, switchgear, and SCADA equipment under the supervision of the Lead Solar Electrician.
- Completes written and electronic records (i.e. work orders, calibration sheets, time cards, material requests) required to document the work in progress and as it is completed.

1 APR 2015 – 1 APR 2016 – Elfasher, Sudan

**ELECTRICAL ENGINEER – 3RE&C**

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- Perform diagnostics and preventive maintenance of electrical systems, all electrical lighting and power systems, main distribution and control panels
- for generators, water, and sewage distribution systems.
- Install, service, maintain and repair electrical system components in compliance with recognized standards and regulations pertaining to safety
- and installation codes of all electrical systems.
- Diagnose technical faults and carry-out remedies for malfunctioning or defective electrical systems.
- Analyzes electrical circuits, wiring diagrams, and drawings, and installs, repairs, calibrates, services, or replaces electrical devices and systems to
- prevent overload.
- Inspects, tests evaluates, calibrates, and updates generator systems, and wiring to improve reliability and to assure stability, safety, and compliance.

1 FEB 2013 – 1 JUN 2014 – Elfasher, Sudan

**ELECTRICAL ENGINEER – SUDANESE ELECTRICTY DISTRIBUTION CO.LETD**

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● **EDUCATION AND TRAINING**

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1 AUG 2020 – CURRENT – Delhi Technological University, Bawana Rd,Shahbad Daulatpur Village, Rohini,Delhi, 11004, Delhi, India

**MASTER OF TECHNOLOGY IN POWER SYSTEM ENGINEERING – Delhi Technological Unversity**

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26 MAR 2022 – 27 MAR 2022 – Delhi, India

**ENERGY EFFICIENCY AND DEMAND RESPONSE IMPLEMENTATION IN BUILT INFRASTRUCTURE – Science and Engineering Reserch Board**

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3 FEB 2021 – 7 FEB 2021 – Delhi, India

**ADVANCE MATLAB AND ITS APPLICATIONS (ADMAT-2021) – INDIAN INSTITUTE OF INFORMATION TECHNOLOGY KOTA**

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1 DEC 2010 – 1 DEC 2015 – University of Nyala , South Darfur State , Nyala, Sudan , Nyala, Sudan

**BACHELOR OF SCIENCE IN ELECTRICAL AND ELECTRONICS ENGINEERING – University of Nyala**

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1 MAR 2007 – 1 MAR 2010 – Elfasher , North Darufr State , Sudan , Elfasher, Sudan

**HIGHER SECONDARY CERTIFICATE – Elfasher Modren Secondary School of Bys**

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20 JUN 2018 – 21 JUL 2018 – San Sebastian del los Reyes Madrid, Spain , Madrid, Spain

**CERTIFICATE IN PREDICTIVE MAINTENANCE TESTS FOR POWER TRANSFORMERS – Unitronics electric**

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17 AUG 2017 – 12 SEP 2017 – Bangkok, Thailand

**CERTIFICATE IN ELECTRICAL GENERATION PROTECTION SYSTEM – Chulalongkorn University at Bangkok**

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11 JUL 2017 – 20 JUL 2017 – Madrid, Spain

**CERTIFICATE IN PROTECTION RELAYS, TRANSFORMER AND SUBSTATION TESTING – Polytechnic University of Madrid**

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● **LANGUAGE SKILLS**

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Mother tongue(s): **ARABIC**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C2	C2	C2	C2	C1
<b>HINDI</b>	A1	A1	A1	A1	

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

● **DIGITAL SKILLS**

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Microsoft Office | Good familiarity with MATLAB, Simulink | ETAB | MATLAB Coding | Wonderware InTouch SCADA (PLC-SCADA) | Electrical Drawings

● **PUBLICATIONS**

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**Mustafa Eltigani I. M, Uma Nangia, Intelligent PSO-PID Controller-Based Maximum Power Point Tracking (MPPT) for Photovoice System, Third International Virtual Conference on Power Engineering Computing and Control (PECCON'22) IEEE- Sponsored, May.2022**

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**Mustafa Eltigani I. M, Uma Nangia, Fractional Order Fuzzy Logic Based MPPT Controller for the Photovoltaic System, National Conference on Emerging Trends in Electric -Mobility & Sustainable Development: Opportunities & Challenges (NCETEMSD-2K22). May.2022**

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**Mustafa Eltigani I. M, Uma Nangia, and Gomaa Haroun A.H, "APPLICATION OF ADRC AND PID CONTROLLER TO DISTRIBUTED LFC FOR AN INTERCONNECTED MULTI-AREA POWER SYSTEM," IJESRT, vol. 10, no. 8, pp. 10-25, Aug. 2021.**

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**Mustafa Eltigani I. M, Uma Nangia, and Gomaa Haroun A.H, "Modeling and Simulation of an Interconnected Multi-Area Thermal Power System Using hFLPID Controller Based Optimization Technique," IAR Journal of Engineering and Technology, vol. 2, no. 5, pp. 22-35, Oct. 2021.**

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● **HONOURS AND AWARDS**

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1 SEP 2020

**Master of Technology Scholars - Indian Council for Cultural Relations**

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- **NETWORKS AND MEMBERSHIPS**

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29 JUN 2021 – CURRENT

**International Association of Engineers (IAENG) Membership**

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Member No.287786