



## Faculty Profile

**Full Name:** NITASHA KHAN

**Position/ Designation:** LECTURER

**Faculty/Department:** ELECTRICAL ENGINEERING DEPARTMENT

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## Short Introduction

I'm a dedicated researcher and engineer specializing in electrical engineering and smart grid technologies, with expertise in deep learning for electricity theft detection. Currently pursuing a Ph.D. at Universiti of Kuala Lumpur, my research focuses on optimizing deep learning algorithms for smart grid operations, enhancing efficiency and reliability. As a visiting faculty and lecturer, I've taught courses like Design Analysis & Algorithm and Power Electronics. With a background as a design and sales engineer, I've designed solar power systems. Recognized for achievements, I secured a research grant and am proficient in Microsoft Office, Python, HTML, and AI.

## Experience

**NAZEER HUSSAIN UNIVERSITY – Karachi, Pakistan**

*Lecturer, Present*

☐ Electrical Engineering Department

**IQRA UNIVERSITY – Karachi, Pakistan**

*Visiting Faculty, January 2020 – July 2022*

**LMA UNIVERSITY – Karachi, Pakistan**

*Lecturer, 2018 – 2019*



- Courses taught: Power Electronics, Multivariable Calculus, Human Computer Interaction (HCI), Computer Organization & Architecture (COA), Data & Network Security, Data Structure & Analysis, Web-Engineering I & II, Data Communication & Network, Professional Ethics, Data & Network Security.

**SHAHEEN ENTERPRISE PVT. LTD – Karachi, Pakistan**

*Design and Sales Engineer, April 2015 – December 2016*

- ☑ Conduct engineering site audits to collect structural, electrical, and related site information for use in the design of residential or commercial solar power systems.
  - ☐ Design or coordinate design of photo voltaic (PV) or solar thermal systems, including system components, for residential and commercial buildings.
  - ☐ Create electrical single-line diagrams, panel schedules, or connection diagrams for solar electric systems using computer-aided design (CAD) software.
  - ☐ Develop design specifications and functional requirements for residential, commercial, or industrial solar energy systems or components.
  - ☐ Provide technical direction or support to installation teams during installation, start-up, testing, system commissioning, or performance monitoring
  - ☐ Develop standard operation procedures and quality or safety standards for solar installation work.
  - ☐ Test or evaluate photovoltaic (PV) cells or modules.

## Educational Information

**UNIVERSITI OF KUALA LUMPUR – MALAYSIA**

*Doctor of Philosophy in Electrical Engineering, July 2020- Present*

Thesis Title: An Optimised Deep Learning Algorithm for Efficient Smart Grids Operations: A Systematic Approach for Electric Theft Detection and Imbalance Load Forecasting.

**NED UNIVERSITY OF ENGINEERING & TECHNOLOGY – PAKISTAN**

*M.E in Telecommunication Engineering, 2015-2017*

3.45 CGPA

**USMAN INSTITUTE OF TECHNOLOGY – PAKISTAN**

*B.E in Electrical Engineering, 2010-2014*

3.2 CGPA



## Achievements, Research/Publications

**Nitasha Khan**, Zeeshan Shahid, Muhammad Mansoor Alam, Aznida Abu Bakar Sajak, M. S. Mazliham, Talha Ahmed Khan, and Syed Safdar Ali Rizvi (2022), Energy Management Systems Using Smart Grids: An Exhaustive Parametric Comprehensive Analysis of Existing Trends, Significance, Opportunities, and Challenges. International Transactions on Electrical Energy Systems, [Q2 , IF=2.639]

**Nitasha Khan**, Muhammad Amir Raza, Darakhshan Ara, Sohrab Mirsaeidi, Ghulam Abbas, Aamir Ali, Muhammad Shahid, Esseddine Touti (2023), A DEEP LEARNING TECHNIQUE ALEXNET TO DETECT ELECTRICITY THEFT IN SMART GRIDS, Frontiers Energy [Q2 , IF 3.8]

**Nitasha Khan**, Aznida Abu Bakar Sajak, Muhammad Alam, M. S. Mazliham, (2020), Analysis of Green IoT, RETREAT Paris conference, IOP Science, [IF=3.409]

**Nitasha Khan**, Zeeshan Shahid, Muhammad Mansoor Alam, Aznida Abu Bakar Sajak, Mobeen Nazar, M. S. Mazliham, A Novel Deep Learning Technique to Detect Electricity Theft in Smart Grids Using Alexnet, IET Renewable Power Generation, [Q2, IF=3.034]

**Nitasha Khan**, Talha Ahmed Khan, Syed Safdar Ali Rizvi and Syed azmat ali abdi, Minimization of High Maintenance Cost and Hazard Emissions Related to Aviation Engines: An Implementation of Functions Optimizations by using Genetic Algorithm for better performance, IEEC-International Electrical Engineering Conference 2023, MDPI Conference series

**Nitasha Khan**, Zeeshan Shahid, Aznida Abu Bakar Sajak, Muhammad Mansoor Alam, Detecting Non-Technical Losses in the Energy Sector using MLPGRU: An Anomaly Detection Approach, IEEE Conference on future grids ETFG 2023 Australia, (Conference date: December-2023)

**Nitasha Khan**, Hasnain Iftikhar, Zeeshan Shahid, Muhammad Mansoor Alam, Aznida Abu Bakar Sajak, M. S. Mazliham, Hybrid MLP-GRU Technique for Accurate and Efficient Electricity Theft Detection in Smart Grids, [Q1 , 8.2 IF , Under Review]

Khan, T., Shaheer Ahmed, Syed Safdar Ali Rizvi, Sadique Ahmad, & **Nitasha Khan**, Electromyography based Gesture Recognition: An Implementation of Hand Gesture Analysis Using Sensors, (2022), Sir Syed University Research Journal