

Burhan U Din Abdullah

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Summary

Motivated researcher and professional in Electrical and Renewable Energy Engineering, specializing in AI-driven optimization for PV systems, MPPT, microgrids, and power quality improvement. Ph.D. completed in August 2025, focusing on optimizing solar PV performance using AI/ML-based inverter control. Aims to contribute to climate change mitigation and energy transition through cutting-edge renewable energy systems and sustainable solutions. Combines technical expertise with teaching, mentoring, and business development to drive impactful energy innovations.

Skills

- Power quality analysis and improvement in renewable-integrated grids
- Data-driven forecasting for energy systems
- AI/ML-based optimization for PV performance and inverter control
- Microgrid design, stability, and reliability assessments
- Integration of renewable energy systems into smart grids
- Maximum Power Point Tracking (MPPT) algorithm design and optimization
- Energy system optimization techniques using simulation and modeling tools
- MATLAB/Simulink modeling and simulation
- Research writing, scholarly publication, and mentoring
- Fluency in using R, Python, and Nvivo for data analysis

Certifications

- PLC Simulation Software: Factory I/O & Connected Component Workbench — LinkedIn, Jul 2025
- Project Management: Technical Projects — LinkedIn, Jul 2025
- Strategy and Game Theory for Management — IIM Ahmedabad, Jan 2025
- AI Foundations — LinkedIn, Oct 2024
- Big Data & Hadoop Foundations — Johns Hopkins Univ., Apr 2024
- Data Science — IBM, Mar 2024
- Electric Power Systems — Univ. at Buffalo & SUNY, Feb 2024
- Introduction to Marketing — Wharton Online, Nov 2023
- Diploma in Environmental Management — Alison, Jun 2023

Experience

Business Development Manager, Helium Four Solar Pvt. Ltd.

02/2025–Present

- Led strategic partnerships, increasing project leads by 35%.
- Conducted market analysis and secured contracts with clients in renewable energy sector.

Teaching Assistant, Sharda University 03/2021–09/2023

- Delivered lectures, assessed students, and developed resources on renewable energy systems and power systems.
- Published articles and supported research projects on MPPT and AI for renewable systems.

Consultant: Business Development & Planning, Aress Software 12/2015–11/2017

- Developed actionable business plans for clients in the energy sector.
- Provided consulting on operations and organizational improvements in renewable energy projects.

Internship Trainee, Electricity Department JK 02/2014–05/2014

- Learned protection schemes of busbars, transformers, and lines in power systems.

Education

Ph.D. in Electrical Engineering Sharda University, Jul 2025 (Completed)

Research: Intelligent MPPT control for PV systems connected to the grid.

M.Tech. in Power Systems J.C. Bose University, Aug 2020

Thesis: Performance Analysis of Hybrid PV and Wind Systems connected to the grid.

B.Tech. in Electrical & Renewable Energy Engineering Baba Ghulam Shah Badshah University, Aug 2015

Thesis: Automation of Building Lighting System.

Publications

- Comparative Analysis Using Multiple Regression Models for Forecasting PV Power Generation (Q1, SCI, *Energies*)
- Hybrid Artificial Ecosystem Optimizer & Incremental Conductance MPPT Controlled PV System (Q1, SCI, *Energies*)
- IoT-Based Solar Monitor System (IEEE Explorer)
- Application of AI in MPPT for Solar Power Systems: Review (ICAIM 2023)
- Performance and Reliability of Microgrid with PV Units (Book Chapter, Taylor & Francis)
- Hybrid MPPT Control Using Hybrid Pelican Optimization Algorithm with PO for PV Connected Grid (Q1, SCI, *Frontiers in Energy Research*)

Other Roles

- Reviewer: Intl. Journal of Ambient Energy, Springer Nature, Contemporary Mathematics.
- Member of Student Council 2023–2024, Sharda University.

Languages

- English (Fluent), Urdu (C1), Hindi (B1)

References

Dr. Suman Lata Dhar Associate Professor, Sharda University Phone: +91-8448198395 Email: Suman.lata@sharda.ac.

Dr. Shiva Pujan Jaiswal Associate Professor, Sharda University Phone: +91-8826998122 Email: shiva-jaiswal@gmail.com