MOHAMED IJAS PAKEEH

Electrical and Electronic Engineer

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SUMMARY

Passionate electrical and electronics engineer seeking new opportunities to apply expertise in real-world projects, while continuing to learn and innovate alongside industry experts to contribute to a tech-driven future

PROFESSIONAL EXPERIENCE

Trainee Electrical Engineer

Ceylon Electricity Board

- Gained hands-on experience in power generation by assisting in the operation and maintenance of thermal (LVPP) and hydro power plants (UKTPS).
- Conducted power system protection analysis, including substation operations, load flow studies, and lightning protection following IEC standards,
- Supported high-voltage operations, including 220kV hot line activities, transmission grid planning, reviewing the Colombo Port City Single Line Diagram (SLD) for system understanding, and witnessing high-voltage testing at Port City Colombo.
- Assisted in medium-voltage (MV) system projects, including MV (33 kV) line maintenance, MV distribution line upgrades, gantry construction, and transformer voltage penetration level assessments.
- Developed expertise in energy management, bulk power supply, distribution standards for CEB Construction, and new customer connection procedures

Trainee Electrical & Telecommunication Engineer

SLBC High Power Transmission Station

- Actively engaged in generator maintenance and routine check-ups at HPTS, enhancing practical skills in power system operations.
- Gained practical experience in AM communication by exploring the Trincomalee High Power Transmission Station (HPTS) frequently and observing its operations firsthand.

Sri Lanka Broadcasting corporation

- Performed an in-depth study of Sri Lanka's radio and antenna networks, with a focus on design and performance optimization
- Gained practical knowledge of signal processing techniques, communication protocols, and studio equipment operation relevant to engineering applications.

TECHNICAL SKILLS AND INTERESTS

Software Platforms: AutoCAD, ETAP, PSSE, PVsyst, DIALux evo, Revit (including MEP), Navisworks, KiCad, MATLAB (including Simulink), Ansys HFSS Optimization & AI: Particle Swarm Optimization (PSO), Genetic Algorithm (GA), AI for Power systems Hardware Tools: Arduino Networking Tools: Cisco Packet Tracer, MATLAB, VS Code

EDUCATION

B.Sc. Eng. (Hons) in Electrical and Electronic Engineering South Eastern University of Sri Lanka



Sep 2022 – Dec 2022

Trincomalee, Sri Lanka

Colombo, Sri Lanka

Oct 2023 - Jan 2023 Sri Lanka

PROJECTS

Integration of Distribution Generators (DGs) in Medium Voltage Radial Distribution System Using Enhanced particle swarm Optimization Algorithm. (Final Year Research Project)

- * Optimal DG Placement in Power Systems: Conducted an in-depth study on the integration of Distributed Generators (DGs) in medium-voltage radial distribution networks. The research aimed to minimize power losses and improve voltage profiles through advanced heuristic optimization techniques.
- * Implementation of PSO Algorithm: Designed and implemented an Enhanced Particle Swarm Optimization (PSO) algorithm for optimal DG placement, determining the most effective locations and sizes of DGs in the IEEE 33-Bus Radial Distribution System.
- * Power Loss Minimization Analysis: Developed MATLAB simulations to generate power loss minimization curves using the PSO algorithm, demonstrating the effectiveness of optimized DG placement in reducing losses.
- * Hybrid Energy Integration for Sustainable Distribution: Investigated the integration of hybrid DGs, including wind and solar energy sources, to enhance the sustainability, efficiency, and reliability of power distribution systems.
- * Achieved a 2% reduction in total power losses and improved the voltage profile to 0.99 p.u. through optimal DG placement using an enhanced PSO algorithm

Power Flow Analysis of the SEUSL Distribution Network Using ETAP

- * Modeled the university's power distribution system, including substations, transformers, and feeders.
- * Performed load flow analysis and recommended reactive power control and load balancing strategies to improve system efficiency.

PROFESSIONAL AFFILIATIONS

Student Member Institute of Engineers Sri Lanka (IESL) Membership ID: S-31749 Student Member Engineers Australia Membership ID: 10546699

VOLUNTEERING & EXTRA CURRICULAR

Assistant Manager	2023
Rovers And Robotic Division - SEDS AGNI	
Team Member	2021-2022
Faculty of Engineering, Cricket Team	
Mathematics and Science Teacher	2019-2023
Ikhrima College, Kalmunai	
REFERENCES	

Eng. Amil Bambaravanage, Senior Project Manager,	W.G.C.W. Kumara
Sri Lanka - Substations Balfour Beatty	PhD (NCU, Taiwan), MEng (AIT, Thailand), BSc Eng.
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