NIKHIL B. SARDAR

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PROFILE

A Doctor of Philosophy aspirant with a strong interest in power electronics for electric vehicles and substantial understanding of the field. My research till date has helped me improve my skills in the field of electrical vehicle, which I am enthusiastic about.

EDUCATION

National Institute of Technology, Warangal, India — Aug' 2015 – May' 2017
M.Tech: Electrical Power System Engineering
CGPI: 8.2/10

Walchand College of Engineering, Sangli — July' 2009 – June' 2013
B. Tech: Electrical Engineering
GPI: 7.42/10

PROJECTS

M.Tech Project: Aug' 2015 – May' 2017
Real-Time Monitoring of Points of Common Coupling in Distribution Systems through State Estimation:
Guide Name: Dr. Sydulu Maheswarapu

- Modeled a distribution Network.
- Performed Root-Vector based Algorithm for observability test for IEEE 34 bus system to added Pseudo Measurements in the system.
- Implemented and compared results of Forward/Backward sweep algorithm and Improved Load flow method of IEEE 34 bus distribution system.
- Implemented state estimation in distribution system using weighted least squares method.
- Identified bad data using collinearity test.
- Identified unplanned reactive and active power inputs at PCC to prevent the grid from isolating itself without a system fault.
- The results were assessed and compared to the planned power injections.
- This estimated and recognized unscheduled power injections at PCC caused by natural calamities that affected distribution networks.

B.Tech Project: July' 2009 – June' 2013
Energy audit at (KPT) Kulkarni power tools Ltd., Shirol
Guide Name: Prof. Madhukar Wavare

- Measured Power factor of a company using power analyser device.
- Designed an active filer on MATLAB to improve the overall power factor.

PUBLICATIONS AND PATENT

International Conference:

Megha Jadhav, Aarti Chaure, Aditya Netake, Indrajit Pawar, **Nikhil B Sardar**, Vaishali Katkar, "Regenerative System for Mountain E-Bicycle", 1st International Conference on Circuits, Power, and Intelligent Systems (CCPIS), 2023

Vaishnavi Bhagwat, Harshvardhan Barge, Ganesh Naik, Vaishali Katkar, **Nikhil B Sardar**, Robust Estimation of State of Charge for Electric Vehicular Application",1st International Conference on Circuits, Power, and Intelligent Systems (CCPIS), 2023

Mohan P Thakre, Yogesh V. Mahadik, **Nikhil B Sardar**, "Architecture of a HV Power Battery Protection Devices for Hybrid Electric Vehicles," (HEV), - IOP Conf. Series: Materials Science and Engineering, ICCSSS 2020

Mayur M. Pawar, Shubham V. Ranbhare, Shree G. Mane, **Nikhil B. Sardar**, "Emergency Robot", Proceedings of Cybernetics, Cognition and Machine Learning Applications (ICCCMLA 2020)

Renuka D. Modak, Vikramsinh A. Doke, Sayali U. Kawarkar, **Nikhil B Sardar** "Wireless Battery Monitoring System for Electric Vehicle", Proceedings of Cybernetics, Cognition and Machine Learning Applications (ICCCMLA 2020)

Ishan Patil, Darshan Lakade, Sarthak Khute, **Nikhil B Sardar**, "Throttle Less Electric Bicycle Controller Using Fuzzy Logic", Emerging Technologies in Digital Transformation and Aligned Education, IEEE PuneCon 2023 ((Presented)

National Journal:

Apurva Borghare, Arati Bhosale, Shital Kardile, **Nikhil Sardar**, "Smart Energy Monitoring using ARM Cortex ", SAMRIDDHI – A Journal of Physical Sciences, Engineering & Technology Vol. 12, Special Issue 2, 2020, ISSN: 2454 – 5767. RNI No. UPENG04179

Patent:

"Throttle-less E-bicycle" - Application No.202221075671 A has been published under Section 11A of the Indian Patents Act on January 27, 2023.

RESEARCH SUMMARY

Google Scholar: Citations: 3, h-index: 1, i-index: 0 (By March 2024)
https://scholar.google.com/citations?hl=en&user=HJbiGIcAAAAJ

ACADEMIC WORK EXPERIENCES

Assistant Professor — Aug' 2018 – Present
MIT Academy of Engineering, Alandi (D), Pune, India

- Research and patent on "Throttle-less E-bicycle".
- Research on Fuzzy logic-based controllers for BLDC and PMDC Motor.
- Courses taught:
  - Electrical and Electronics engineering
  - Power Electronics
  - Calculus and differential equations
  - Electronics devices and circuits

Assistant Professor — June' 2017 – May' 2018
Vidya Pratishthan's Kamalnayan Bajaj Institute of Engineering and Technology, Baramati

- Courses taught:
  - Power Systems
  - Power Electronics
  - Electronics devices and circuits

AWARDS AND ACHIEVMENTS

- National Institute of Technology, (NIT), Warangal, GATE Scholarship (Aug' 2015 – May' 2017)
- Qualified in electrical engineering GATE 2014-15 & 2017-18

EXTRA CURRICULAR ACTIVITIES

- Composed, written, and recorded 5 Hindi songs.
- Played Bass Guitar and Piano for many shows.
- Performed at TEDxMITAOE 2020.
- TEDxMITAOE Convener for 3 years.

REFERENCES

- Prof. M. Sydulu, Professor, Department of Electrical Engineering, National Institute of Technology, Warangal.
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  Email Id-msydulu@nitw.ac.in

- Dr. D. S. More (PhD, IIT Bombay), Head of the Department of Electrical Engineering Walchand College of Engineering, Sangli.
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