

Research Funding:

A team of 4 students have received a funding of total ₹4,80,000/- from IIT Bombay's CHANAKYA Fellowship Program 2023. They worked on an Industrial problem statement "Wind Turbine Predictive Maintenance using Machine Learning" given by Mathworks Bangalore.

CHANAKYA Fellowship Project No: CFP/2022/A/012

CHANAKYA Grant Number: TIH-IoT/2023-03/HRD/CHANAKYA/SL/CFP-006A

Project Title: Wind Turbine Predictive Maintenance using Machine Learning

Participants:

1. Faizan Shaikh
2. Pratiksha Lohar
3. Mayur Mali
4. Rohit Deore

Principal Investigator: Mr. Shahid Akhtar

Congratulations!

Project proposal CFP/2022/A/012 titled
"Wind Turbine Predictive Maintenance using Machine Learning" For
Chanakya Fellowship Program 2022-23 has been shortlisted. The students will be working on
industry problem statement under the supervision of **Prof. Shahid Akhtar**.
Each student will be entitled to a monthly fellowship.

Prof. Shahid Akhtar

Mr. Mayur Mali **Mr. Rohit Deore** **Ms. Lohar Pratiksha** **Mr. Faizan Shaikh**

Department of Electrical Engineering

CIVIL ENGINEERING | **COMPUTER ENGINEERING** | **ELECTRICAL ENGINEERING** | **INFORMATION TECHNOLOGY** | **MECHANICAL ENGINEERING**

List of Publications by Students:

Academic Year: 2023-24

S. No.	Name of Student	Title of Paper	Name of Journal/ Name of Conference	Date of Publication/ Date of Conference
1	Sulkshana Patil	Renewable Energy-Based Expressway DG System	IEEE International Conference on Automation, Computing and Renewable Systems (ICACRS 2023)	11. December.2023
	Kajal More			
	Kuldip Patil			
	Hrishikesh Chaudhari			
2	Darshana Chaudhari	Potential Assessment of Liquid Tree in Dhule City	1 st International Conference on Advancement in Energy	18-20.December.2023
	Kalyani Chavan			
3	Jayesh Wagh	Design & Simulation of Smart Inverter	ISTE The Indian Journal of Technical Education	31.December.2023
4	Shweta Baviskar	Predictive Analysis of 50 KW Solar Photovoltaic System using PVsyst	IEEE International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics	24-25 January 2024
	Rahul Beldar			
5	Abhishek Deore	Analysis of PV Grid-Connected Bidirectional Batteries	IEEE International Conference on Intelligent and Innovative Technologies in Computing, Electrical and Electronics	24-25 January 2024
	Abbas Saifee			
6	Rohini More	Transient Stability Analysis of IEEE Test System	IEEE International Conference for Women in Innovation, Technology and Entrepreneurship	16-17.February.2024
	Kalyani Chavan			
7	Faizan Shaikh	Prediction of Wind Turbine Bearing Faults: A Machine Learning Approach	IEEE International Students' Conference on Electrical, Electronics, and Computer Science	24-25 February 2024
	Pratiksha Lohar			
	Mayur Mali			
	Rohit Deore			
8	Faizan Shaikh	Fault Diagnosis and Predictive Maintenance of Wind Turbine: A Machine Learning Approach	Springer International Conference on Sustainable Power & Energy Research	01-03.March.2024
	Pratiksha Lohar			
	Mayur Mali			
	Rohit Deore			
9	Kalyan Gajare	An Artificial Intelligence Approach for Prediction and Classification of Transmission Line Faults	Springer International Conference on Sustainable Power & Energy Research	01-03.March.2024
	Jayesh Kolhe			
	Ilyas Dhobi			
	Rushikesh Patil			
10	Siddhant Vispute	Blockchain and AI-Powered Intelligent Power Grid: Analysis & Implementation	Springer International Conference on Innovations in Cybersecurity and Data Science	15-16.March.2024
11	Chandanraj Patil			15-16.March.2024

	Saurabh Bhavsar	For Sustainability: Blending Solar PV + Wind Power for Managing Intermittency	10 th International Conference on Indian Knowledge System and Spirituality For Advancing Technology	
12	Asad Ansari	A Fuzzy Logic Approach for Enhancement of Maximum Power Extraction in Solar Photovoltaic System	IEEE International Conference on Recent Innovation in Smart and Sustainable Technology	15-16.March.2024
	Faizan Shaikh			
13	Bhushan Patil	Analysis of Hybrid Distributed Generation System Using HOMER	IEEE International Conference on Smart Technologies for Power and Renewable Energy (SPECOn)	2.April.2024
	Vikas Patil			
	Joy Fernandes			
	Mustkim Manyar			

Academic Year: 2022-23

S. No.	Name of Student	Title of Paper	Name of Journal/ Name of Conference	Date of Publication/ Date of Conference
1	Mohanish Thakur	The Current State of the Art for PV Grid Connected System Issues with Power Quality	2022-IEEE International Interdisciplinary Humanitarian Conference for Sustainability (IIHC-2022)	18- 19.November.2022
	Aayush Patil			
2	Amit Wani	Comparative Analysis of Power Quality Issues in Grid-Integrated Wind Energy System	2022-IEEE International Interdisciplinary Humanitarian Conference for Sustainability (IIHC-2022)	18- 19.November.2022
	Prathamesh Mistari			
3	Sachin Potdar	Arduino Based Zero Emission Residential Home for Sustainable Township	IEEE International Conference on Smart System & Inventive Technology	23-24 January 2023
	Chetan More			
	Shivam Bhingare			
	Vishal Mahajan			
	Ankit Girase			
4	Rohit Bhadane	IOT Based Accident Detection and Alert System	8 th International Conference "Shaastrarth-2023" on Advances & Applications of Artificial Intelligence,Machine Learning & Data Science	23-24 June 2023
	Ronak Jain			
	Amit Pawar			
	Bhushan Jagtap			
	Pravin Lonari			
5	Kunal Rajput	Smart Farming with IoT: A Review of Sensor Based Techniques and Data Analytics	International Conference on Innovations in the Power Sector towards Sustainable Development Goals	23-24 June 2023
	Krushnaraj Koli			
6	Kunal Rajput	Effective Control of DC to DC Converter for the Application of	International Conference on Innovations in the Power Sector towards Sustainable Development Goals	23-24 June 2023
	Jitendra Patil			

		DC Distribution System		
7	Jitendra Patil	A Systematic Review of IoT Based Solutions for Crop Monitoring and Yield Optimization	International Conference on Innovations in the Power Sector towards Sustainable Development Goals	23-24 June 2023
	Tejaswini Patil			

Academic Year: 2021-22

S. No.	Name of Student	Title of Paper	Name of Journal/ Name of Conference	Date of Publication/ Date of Conference
1	Darshana Chaudhari	Renewable Energy Based Sustainable Home	National Conference on Energy and Mobility	23.December.2021
	Gayatri Shinde			
	Priyanka Mahajan			
	Varsha Patil			
2	Priyanka Mahajan	Perovskite Solar Cells and Introduction to Methods for Improving Efficiency,Stability, Durability of Perovskite Solar Cells	ISTE The Indian Journal of Technical Education	31.December.2021
3	Vedant Jakatdar	Analysis of Rotor Angle Stability of PV Integrated Grid	International Conference on Recent Trends in Electrical & Electronics Engineering	23-24.December.2021
	Shubham Jadhav			
4	Amit Chaudhari	Web Application of Digital Circuit Simulator & Real Time Collaboration	International Conference on Recent Trends in Electrical & Electronics Engineering	23-24.December.2021
	Dhanshri Chavan			
	Monali Patole			
	Yash Thakur			
5	Himesh Thakur	A Review of Power Quality Problems and Solution	International Conference on Recent Trends in Electrical & Electronics Engineering	23-24.December.2021
	Harshal Kalkate			
	Sachin Devkar			
	Devendra Varma			
6	Rutik Badgujar	Dynamic Wireless Charging for Electric Vehicles	International Conference on Recent Trends in Electrical & Electronics Engineering	23-24.December.2021
	Neha Hajare			
	Priyanka Jagtap			
	Mayuri Wagh			
7	Mahesh Baviskar	Performance Analysis of Electric Vehicle Induction Motor with Different Slot Geometry	International Conference on Recent Trends in Electrical & Electronics Engineering	23-24.December.2021
	Charwak Sonawane			
	Hariom Hajare			
	Tushar Patil			

List of Publications by Faculties:

Name of Faculty	Title of Paper	Level of Publication International/ National	Nature of Publication	Name of Journal/ Name of Conference	Indexing	ISSN No.	Publisher	Date of Publication/ Date of Conference	DOI
Dr. Vishal Moyal	Comparative Study on Different Machine LEARNING Algorithms for Neonatal Diabetes Detection	International	International Journal	Journal of Information Technology Management	SCOPUS	2423-5059	University of Tehran	29.February.2024	https://doi.org/10.24963/jitm.2024.96359
	Robust Clustering Based Automated Video Shot Boundary Detection Using Hand-Crafted and Deep Feature Fusion	International	International Journal	International Journal on Artificial Intelligence Tools	SCOPUS	1793-6349	World Scientific	12. February.2024	https://doi.org/10.1142/S0218213024500106

	Applications and challenges of IoT-based smart healthcare systems that use cognitive sensors: an overview	International	International Book Chapter	Cognitive Sensors, Volume 1	SCOPUS	978-0-7503-5326-7	IOP science Publishing	31.Dec.2022	
	Application of IoT to Monitor the Shipping of Goods in Maritime Transportation System	International	International Conference	2022 IEEE North Karnataka Subsection Flagship International Conference (NKCon)	SCOPUS	978-1-6654-5342-4	IEEE	20-21.November.2022	
	IOT based Accident Detection and Alert System	International	International Conference	International Conference Shaastrarth-2023 on Advances and Applications of Artificial Intelligence, Machine Learning and Data Science				23-24.June.2023	
	Crime Detection Approach Using Big Data Analytics and Machine Learning	International	International Journal	Neuroquantology	SCOPUS	1303-5150	Anka Publisher	30.May.2022	
	A Smart Solution for Cancer Patient Monitoring Based on Internet of Medical	International	International Journal	Evidence-Based Complementary and Alternative Medicine	SCI	1741-4288	Hindawi	24-Jun-22	

	Things Using Machine Learning Approach								
	Enhance the ability to diagnose, monitor and treat medical issues through image processing	International	International Journal	Bulletin of Environment, Pharmacology and Life Sciences	WOS	2277-1808	Academy for Environment and Life Sciences, India	01-May-22	
	Energy-Efficient UART Design on FPGA Using Dynamic Voltage Scaling for Green Communication in Industrial Sector	International	International Journal	Wireless Communications and Mobile Computing	SCI	1530-8677	Hindawi	30-May-22	
	Implementing a Programmable Drop Voltage Controller VLSI	International	International Journal	Journal of Nuclear Energy Science & Power Generation Technology	SCOPUS	2325-9809	SciTechnol	30-Sep-21	
	A Design of Power-Efficient AES Algorithm on Artix-7 FPGA for Green Communication	International	International Conference	IEEE International Conference on Technological Advancements and Innovations (ICTAI-2021)	SCOPUS	NA	NA	10-12-December-2021	

	Bidirectional Smart Grid Communication Platform with Network Devices: A Case Study	International	International Conference	IEEE International Conference On Advancements In Electrical Electronics Communication Computing And Automation (ICAECA-2021)	SCOPUS	978-1-6654-2829-3	IEEE	08-09 October 2021	
	A Novel CNN Method for the Accurate Spatial Data Recovery from Digital Images	International	International Journal	Materials Today: Proceedings	SCOPUS	2214-7853	Elsevier	30-Jun-21	
	An Efficient Shape Adaptive Techniques for the Digital Image Denoising	International	International Journal	Turkish Journal of Computer and Mathematics Education	SCOPUS	1309-4653	Science Research Society	30-Apr-21	
	A Suggestive Low Power TIQ Comparator Architecture using Adiabatic Logic for Implementation of 3-bit Flash type ADC	International	International Journal	International Journal of Engineering and Advanced Technology (IJEAT)	SCOPUS	2249-8958	Blue Eyes Intelligence Engineering & Sciences Publication	31-Dec-19	

Dr. Namra Joshi	Implementation of fuzzy controller based active filter for harmonic mitigation of grid-connected PV-system	International	International Journal	International Journal of Applied Power Engineering (IJAPE)	SCOPUS	2252-8792		11.March.2024	10.11591/ijape.v13.i3.pp539-545
	Solar Powered Garbage Management System	International	International Journal	International Journal of Engineering and Management Research	Scilit, Google Scholar	2250-0758	V Publishers	29-06-2024	10.5281/zenodo.12703294
	An Overview on Development & Prospects of Geothermal Power Plant in India	International	International Conference	2024 INTERNATIONAL CONFERENCE ON COMPUTER COMMUNICATION AND INFORMATICS	SCOPUS	979-8-3503-4821-7	IEEE	23-25 January 2023	
	Importance of Phasor Measurement Unit in Modern Power System	International	International Conference	2023 5th International Conference on Smart Systems and Inventive Technology (ICSSIT-2023)	SCOPUS	978-1-6654-7467-2	IEEE	23-25 January 2023	
	Role Of Renewable Energy Development In Economic Growth: Indian Perspective	International	International Journal	Turkish Online Journal of Qualitative Inquiry (TOJQI)	SCOPUS	1309-6591	Science Research Society	31-Jul-21	

	Biomass Energy For Rural India: A Sustainable Source	International	Internantional Conference / Book Chapter	5th International Conference on Intelligent Data Communication Technologies and Internet of Things (ICICI 2021)	SCOPUS	2367-4520	Springer Book on Lecture Notes on Data Engineering and Communications Technologies	27-28, August 2021	
	Effective Integration of Distributed Generation System in Smart Grid	International	Internantional Conference / Book Chapter	3rd International Conference on Evolutionary Computing and Mobile Sustainable Networks	SCOPUS	2367-4520	Springer Book on Lecture Notes on Data Engineering and Communications Technologies	26-27, September 2022	
	Stability Analysis of Wind Integrated 14 Bus System	International	International Conference	Third International Conference on Inventive Research in Computing Applications (ICIRCA)	SCOPUS	978-1-6654-3877-3	IEEE	02-04, September 2021	

	Application of UPFC for Enhancement of Voltage Stability of Wind Based DG System	International	Internantional Conference / Book Chapter	6th International Conference on Inventive Systems & Control [ICISC-2022]	SCOPUS	2367-3389	Springer Book on Lecture Notes in Networks and Systems	6-7, January 2022	
	Effective Use of Robotics in maintenance of overhead Transmission Line	International	International Conference	2nd International conference on IoT, Social, Mobile, Analytics & Cloud in computational vision & Bio-engineering	SCOPUS	1556-5068	Elsevier	29-30, October 2020	
	Analysis & control of Wind Power plant	International	International Conference	4th International conference on Electronics, Communication & Aerospace Technology	SCOPUS	978-1-7281-6387-1	IEEE	05-07 November 2020	
	Renewable Energy Powered Sustainable Home	International	International Journal	International Journal of Mechanical Engineering	SCOPUS	0974-5823	International Journal of Mechanical Engineering	01-Dec-21	
	An Overview on High voltage direct current Transmission Projects in India	International	International Conference	IEEE 6th International Conference on Inventive	SCOPUS	978-1-7281-8501-9	IEEE	20-22 January 2021	

				Computation Technologies (ICICT)					
	Application of Motors in Power System Protection Devices	International	International Journal	Journal of critical reviews (JCR)	SCOPUS	2394-5125	Journal of Critical Review, Malaysia	31.August.2019	
	Application of IoT in Indian Power System	International	International Conference	5th International Conference on Communication and Electronics Systems (ICCES)	SCOPUS	978-1-7281-5371-1	IEEE	10-12 June 2020	
	Role of wind based distributed generation system in Sustainable development of India	National	National Conference	National Conference on Sustainable Development of Clean & Green India	NA	NA	IETE Local Chapter	26-27.Oct.2018	
	Hilly Highways Accident Alert System	International	International Journal	Journal of Emerging Technologies and Innovative Research	UGC	2349-5162	JETIR	30.Sep.2018	

Dr. Rajkumar Jhapte	Application of Convolutional Neural Networks for Early Detection and Classification of Alzheimer's Disease from MRI Images	International	International Journal	Journal of Electrical Systems (JES)	SCOPUS	1112-5209		05.April.2024	https://doi.org/10.52783/ies.1346
Dr. Gaurav Patil	The Current State of the Art for PV Grid Connected System Issues with Power Quality	International	International Conference	2022 International Interdisciplinary Humanitarian Conference for Sustainability (IIHC)	SCOPUS	978-1-6654-5687-6	IEEE	18-19 November 2022	
	Comparative Analysis of Power Quality Issues in Grid-Integrated Wind Energy System	International	International Conference	2022 International Interdisciplinary Humanitarian Conference for Sustainability (IIHC)	SCOPUS	978-1-6654-5687-6	IEEE	18-19 November 2022	
	A State of Art of Smart Grid and their Smart Solutions	International	International Journal	International Journal of Research in Engineering and Science (IJRES)	NA	2320-9364	IJRES	30.May.2023	
	Computation of mass-spring-damper system using MATLAB	International	International Journal	Journal of East China University of Science and Technology	SCOPUS	1006-3080	Journal of East China University of Science and	11.OCT.2022	

							Technology, China		
	A Review on Grid Integration Challenges of Wind Energy Systems	International	International Journal	International Journal of Engineering and Management Research (IJEMR)	NA	2250-0758	Vandana Publications	31.08.2022	https://doi.org/10.31033/ijemr.12.4.17
	Computer Vision in the Field of Electrical Engineering: A Review	International	International Journal	SCOPUS	NA	0974-5823	International Journal of Mechanical Engineering	September 2021.	
	A Comprehensive Review of Haptic Technology and its Applications	International	International Journal	Journal of critical reviews (JCR)	SCOPUS	2394-5125	Journal of Critical Review, Malaysia	31-Aug-19	
	Rechargeable Li-Ion Based Electrical Vehicle	International	International Journal	Journal of Emerging Technologies and Innovative Research	UGC	2349-5162	JETIR	31.Oct.2018	

Dr. M Ankush Kumar	Comparative Analysis of Artificial Intelligent Controllers Based Intentional Islanding Algorithm for Distributed Energy Resources (DERs) in Disaster Management	International	International Journal	Electric Power Components and Systems	SCI	1532-5016	Taylor & Francis	08.November.2022	https://doi.org/10.1080/15325008.2022.2132555
Mr. Sandeep Ushkewar	Design and Simulation of Smart Inverter	International	International Journal	Indian Journal of Technical Education	UGC CARE	0971-3034	ISTE	31.December.2023	
	Fault Detection and Diagnosis in Electric Vehicle Systems using IoT and Machine Learning: A Support Vector Machine Approach	International	International Journal	Journal of Electrical Systems (JES)	Scopus	1112-5209		05.April.2024	https://doi.org/10.52783/jes.1414
	Enhancing Capabilities of Wireless Transmission for Electric Vehicle	International	International Conference	2022 Global Energy Conference (GEC)	SCOPUS	978-1-6654-9751-0	IEEE	26-29 October 2022	

	Wireless Charging in a Dynamic Environment for Electric Vehicles	International	International Conference	2022 IEEE Bombay Section Signature Conference (IBSSC)	SCOPUS	978-1-6654-9291-1	IEEE	08-10 December 2022	
	Perovskite Solar Cells & methods for improving Efficiency, Stability and Durability	International	International Journal	The Indian Journal of Technical Education	NA	0971-3034	ISTE	31-Dec-21	
	Sustainable Smart Grid Energy from Detritus and Biomass Recycling	International	International Journal	SCOPUS	NA	0974-5823	International Journal of Mechanical Engineering	01-Nov-21	
	Efficient Wireless Charging for Electric Vehicle	International	International Journal	International Journal of Engineering Research & Technology (IJERT)	NA	2278-0181	ESRSA Publications	31-Oct-20	
	Analysis and implementation of FACTS devices on a transmission line	International	International Journal	Journal of critical reviews (JCR)	SCOPUS	2394-5125	Journal of Critical Review, Malaysia	31-Dec-19	

	Mathematical Modelling of STATCOM for Reactive Power Compensation in Power System and Approach to the Renewable Energy	International	Internantional Conference / Book Chapter	International Conference on Emerging Trends in Electrical, Communications, and Information Technologies	Scopus	1876-1119	Springer	20-22.Dec.2018	
	A Hybrid Solar -Wind Power Generation System : Challenges and Prospects	International	International Journal	Journal of Emerging Technologies and Innovative Research	UGC	2349-5162	JETIR	31.Dec.2018	
Mr. Jagdish More	A Novel Fuzzy Logic Controller for Power Optimisation of Electric Vehicle Induction Motor	International Journal	International Journal	SCOPUS	NA	0974-5823	International Journal of Mechanical Engineering	September 2021.	
	A Brief Review of Charging Station Topologies for Electric Vehicles	International	International Journal	Journal of critical reviews (JCR)	SCOPUS	2394-5125	Journal of Critical Review, Malaysia	31-Jul-19	
	A Hybrid Solar -Wind Power Generation System : Challenges and Prospects	International	International Journal	Journal of Emerging Technologies and Innovative Research	UGC	2349-5162	JETIR	31.Dec.2018	

Ms. Farha Naz	Effective Control of DC-DC Converter for Application of DC Distribution System	International	International Conference	International Conference on “Innovations in the Power Sector towards Sustainable Development Goals - iPSSDG	NA	978-93-5891-755-0	Damodar Valley Corporation, Kolkata	23-24 June 2023	
	IOT for Agriculture: A Review of Opportunities, Challenges & Benefits for Farmers & Society	International	International Conference	International Conference on “Innovations in the Power Sector towards Sustainable Development Goals - iPSSDG	NA	978-93-5891-755-0	Damodar Valley Corporation, Kolkata	23-24 June 2023	
	A Systematic Review of IOT based Solutions for Crop Monitoring & Yield Optimization	International	International Conference	International Conference on “Innovations in the Power Sector towards Sustainable Development Goals - iPSSDG	NA	978-93-5891-755-0	Damodar Valley Corporation, Kolkata	23-24 June 2023	
	Analysis of Single Axis Solar Tracking System	International	International Journal	SCOPUS	NA	0974-5823	International Journal of Mechanical Engineering	March..2022	

	Closed loop Buck & Boost Converter Mathematical Modeling, Analysis and Simulation using MATLAB	International	International Journal	International Journal of Engineering and Advanced Technology (IJEAT)	NA	2249-8958	Blue Eyes Publications	30.April.2021	
	Simulation of a Controller for 3 Phase Rectifier with Unity Power Factor for Microgrid	International	International Journal	International Journal of Recent Trends in Engineering and Research	NA	2455-1457	International Journal of Recent Trends in Engineering and Research (IJRTER)	30-May-20	
	A review of IoT in Agriculture: opportunities, challenges, and benefits for farmers	International	International Journal	Journal of critical reviews (JCR)	SCOPUS	2394-5125	Journal of Critical Review, Malaysia	30-Sep-19	
Mr. Shahid Akhtar	A chaotic chimp sine cosine algorithm for optimizing hydrothermal power scheduling	International	International Journal	Chaos, Solitons and Fractals	SCIE, SCOPUS	Print ISSN: 0960-0779 Online ISSN: 1873-2887	Elsevier Ltd.	03-Jan-25	https://doi.org/10.1016/j.chaos.2024.115972
	A Critical and Comparative Review of Load Frequency Control	International Journal	International Journal	SCOPUS	NA	0974-5823	International Journal of Mechanical Engineering	01-Nov-21	

	Topologies and Control Techniques								
--	-----------------------------------	--	--	--	--	--	--	--	--