

Name - **Dr. Rajvardhan Jigyasu**
 Mobile no. **+91 9453561238 or +91 8360701190**
 E mail.id – **r.jigyasu@eed.svnit.ac.in, drjigyasu16@gmail.com**



Career Objective:

To leverage my expertise in Artificial Intelligence, Machine Learning, and condition monitoring of electrical machines to contribute to cutting-edge research and innovative solutions. With a strong academic background, hands-on experience in fault detection using machine learning, and a proven track record in academia and industry, I aim to drive impactful projects and mentor future professionals in electrical engineering and advanced diagnostics. Seeking opportunities for research and development collaborations that foster professional growth while contributing to organizational goals

Professional Experience: (Total- 8 years)

S.No.	Organization	Duration	Designation	Duties Under Taken	Reason To leave
Research Experience- Industrial Project					
1	Centre for Automotive Research and Tribology (CART) Department Indian Institute of Technology (IIT) Delhi	September 2025- August 2026	Post-Doctoral Research Associate	Working on Hyundai Motor Company Korea project “Development of noise signals removal technology for vibration and sound signal measurement of EV motors”	Project Complete
Teaching Experience					
1	Sardar Vallabhbhai National Institute of Technology Surat Gujarat	August 2026- ongoing	Assistant Professor Grade II	Teaching and Research	Ongoing
2	Guru Gobind Singh Indraprastha University Delhi (Govt. University)	05 September 2024- 31 August 2025	Guest Faculty/ Visiting Faculty	Lectures (Basic Electrical and Basic Electronics, Computational methods Subjects in CS, EC, IT Branch), Examination duties	Session Complete
3	Netaji Subhas University of Technology Delhi (Govt. University)	31 July 2024- 31 August 2025	Guest Faculty/ Visiting Faculty	Lectures (Computational methods in Electrical Engineering, Switch Gear and Protection, Energy Policies for Sustainable Development Subjects) in Electrical Branch, Laboratory, Examination duties	Session Complete
4	National Institute of Technology Delhi	7 August 2019- 25 July 2024	Teaching Assistant	Lectures, Laboratory, Research	-
5	Shri Ramswaroop Memorial College of Engineering and Management, Lucknow.	15 Oct 2018- 6 August 2019	Assistant Professor	Lectures, Laboratory duties, course coordinator, external examiner, examination duties, technical events coordinator	Higher Studies (PhD)
6	Dr. M.C. Saxena Group Of Colleges, Lucknow Uttar Pradesh	23 March 2015 – 28 April 2016	Lecturer	Lectures, Laboratory duties, course coordinator, external examiner, examination duties, technical events coordinator	Higher Studies (M.E)

Educational qualification:

Qualification	School/Board/University	Year	Percentage
PhD (Multiple Faults Detection and Diagnosis of Induction Motor using Machine Learning)	National Institute of Technology, Delhi	October 2024	8.64 (CGPA)
Master of Engineering (M.E.)	National Institute of Technical Teachers Training & Research, Chandigarh/ Panjab University	2018	86.40%
B.Tech	Shri Ramswaroop College of Engineering and Management/ Uttar Pradesh Technical University	2014	77.68%
XII	H.A.L School Lucknow/ CBSE	2010	77.00%
X	H.A.L School Lucknow/ CBSE	2008	81.80%

Qualified National Examinations:

Year	Examination Name
2014,2015,2016	Graduate Aptitude Test in Engineering (GATE)
2015	Course on Computer Concepts (CCC)
2019	University Grants Commission–National Eligibility Test (UGC–NET)

Practical Hardware and Software experience:

Hardware	Software
OROS-OR35, Microphone B&K-4966, Vibration Sensor B&K-4533B	MATLAB(Image Processing, signal processing, Machine Learning, Optimization)
National Instruments-9178-Data Acquisition Board, 9227- Current Sensor, 9234- Vibration Sensor, MYDAQ	LabVIEW
Arduino-uno	NVgate
Microprocessor 8086	RSLogix 500
PLC (Allen Bardley)	PSIM
Electric Discharge Machine (EDM)	Scilab
Neware Battery Data Acquisition and Analyser	C

Professional Training/ Certifications:

Year	Company Name	Duration
2012	SOFCON India Pvt Ltd Noida (Hands on Training on PLC and SCADA)	1 Day
2012	CETPA infotech Pvt Ltd Lucknow (MATLAB)	4 Weeks
2013	400 KV Substation, Sarojini Nagar, Lucknow	4 Weeks
27 th June to 2 nd July 2022	Quarbz Info Systems, Kanpur, India (Typhoon HIL)	1 Week

Projects undertaken:

Course	Semester	Project /Thesis Name
Post Doc	-	Development of noise signals removal technology for vibration and sound signal measurement of EV motors
PhD	-	Multiple Faults Detection and Diagnosis of Induction Motor using Machine Learning
-	-	Fault diagnosis of Transformer using DGA
-	-	Smart street light management system
M.E.	4	Model based fault diagnosis of induction motor using vibration and current analysis.
		Robotic Arm control using machine learning and Arduino for six degree of freedom with EMG signal
-	-	Password based door lock system using Microcontroller 8051
-	-	MOSFET driven DC MOTOR speed control by PWM using Arduino
-	-	Home automation using Android and Arduino
-	-	Piezoelectric technology based rural electrification
B.Tech	7-8	Design and Analysis of Grid Connected Photovoltaic Generation System with Active Filtering Function.

List of Patents/Copyrights:

1. “Agentic AI Driven Hybrid IoT System for Real Time Sustainability and Environmental Optimization”, German Patent and Trade Mark Office (DPMA), Government of Germany, Patent Application No. is 202026102116.4., filed on 15/04/2026, granted on 04/05/2026.
2. “Smart Security Monitoring Machine”, Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM) Government of India, Registration no. 497310-001, filed on 04/04/2026, Grant Date: 20/08/2026.
3. “Smart Dashboard Device for Autonomous Mobile Navigation”, Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM) Government of India, Registration no. 484904-001, filled on 23/12/2025, Grant Date: 01/04/2026.
4. “Artificial intelligence based solar powered agriculture robot”, Patents, Designs and Trade Marks Intellectual Property Office, United Kingdom (UK), Registration no. 6429821, Registration date: 12/03/2025, Grant date: 28/03/2025.
5. “IoT based Solar Panel Cleaning Robot”, Office of the Controller General of Patents, Designs & Trade Marks (CGPDTM) Government of India, Registration no. 439840-001, filled on 08/12/2024, granted on 07/02/2025.
6. “Design of an AI-driven emergency response system using NLP and real-time image processing”, Innovation, Science and Economic Development Canada Innovation, Canadian Intellectual Property Office, Registration no. 1228609, dated 30/11/2024.

List of Research Publication:

S.No.	Title of thePaper	Name of conference/Journal	Type	Venue/Status	Date, page, volume
[1]	An algorithmic recipe to construct Lyapunov functions for nonlinear	Asian Journal of Control (SCIE) (Q1)	Journal	Published	First published: 14 April 2026

	sectors with quantization mismatch				
[2]	Efficient Rolling Bearing Fault Diagnosis with a CNN- SVM System Enabled by Automatic Cut-off Conditions for Small Sample Data	Journal of Vibration Engineering & Technologies (SCIE) (Q1)	Journal	Published	12 December 2025, Vol-14
[3]	Data Fusion-Based Multiple Fault Diagnosis of Rotating Machines Using Transfer Learning	International Journal of Computational and Experimental Science and Engineering (SCOPUS) (Q2)	Journal	Published	30 December 2025, Vol 11
[4]	Deep optimal feature extraction and selection based motor fault diagnosis using vibration	Electrical Engineering Journal (SCIE) (Q1)	Journal	Published	12 April 2024, Springer
[5]	Non Invasive fault detection of offshore wind turbines using deep network-based thermogram features	Arabian Journal for Science and Engineering (SCIE) (Q1)	Journal	Published	26 June 24 Springer, 2024
[6]	Hybrid Multi-model Feature Fusion-Based Vibration Monitoring for Rotating Machine Fault Diagnosis	Journal of Vibration Engineering & Technologies (SCIE) (Q1)	Journal	Published	May 2023 Springer
[7]	ML-Based Predictive Modeling of Mechanical Properties in 3D-Printed Polymer Composites for IoT Applications	Journal of Polymer and Composites (ESCI)	Journal	Published	Year : 2025, Volume : 13, Issue : 04, Page : 61-78
[8]	Prognostics and health management of induction motor by supervised learning classifiers	IOP Conference Series: Materials Science and Engineering (SCOPUS) (Q3)	Journal	Published	20th February 2021,
[9]	Smart Classifier Based Prognostics and Health management of Induction Motor	Elsevier Materials Today: Proceedings (SCOPUS) (Q1)	Journal	Published	Oct 30, 2020 - Nov 01, 2020
[10]	Smart Classifiers Based Classification And Condition Monitoring Of Induction Motor Faults	International Journal Of Innovative Technology And Exploring Engineering (IJITEE), ISSN: 2278-3075, (SCOPUS) (Q4)	Journal	Published	Volume-8 Issue-12, October 2019
[11]	EMG Signal Based Pattern Recognition Of Grasping Movement Using MODWT And Weighted K- Nearest Neighbor	International Journal Of Innovative Technology And Exploring Engineering (IJITEE) ISSN: 2278-3075, (SCOPUS) (Q4)	Journal	Published	Volume-8 Issue-10, August 2019
[12]	Current Based Feature Extraction And Classification Of Induction Motor Faults Using Support Vector Machine	International Journal Of Mechanical And Production Engineering Research And Development (IJMPERD) ISSN(P): 2249-6890; ISSN(E): 2249-8001 (SCOPUS) (Q3)	Journal	Published	Dec 2018, 195-204
[13]	Review Of Various Artificial Intelligence Techniques And Its Applications	IOP Conference Series: Materials Science And Engineering IOP Publishing (SCOPUS) (Q3)	Journal	Published	8-9 th October 2018 Vol. 594, No. 1, P. 012023

[14]	Explainable Quantum-Neuromorphic Intelligence: A Self-Evolving Hybrid Framework for Cognitive Computing and Autonomous Decision Systems	Emerging Hybrid Models for Neuromorphic AI and Quantum Computing/ IGI Global (SCOPUS)	Book Chapter	Published	March, 2026
[15]	Machine Learning Based Incipient Fault Diagnosis of Induction Motor	Springer Communications in Computer and Information Science (CCIS) (SCOPUS)	Book Chapter	Published	30-31 March,2023
[16]	Data fusion based smart condition monitoring of critically applied rotating machines	Springer Lecture Notes in Networks and Systems (SCOPUS)	Book Chapter	Published	5th March,2022
[17]	Multiple Faults Diagnosis of Induction Motor Using ANN	Springer CCIS Lecture Notes Series (SCOPUS)	Book Chapter	Published	July 14-15, 2018
[18]	Bearing Fault Diagnosis using Frequency Domain Features and Artificial Neural Networks	Springer SIST Lecture Notes Series (SCOPUS)	Book Chapter	Published	April 06-07, 2018
[19]	Bearing fault diagnosis using CWT and transfer learning	3rd International Conference on Automation and Computation (IEEE: AUTOCOM-2025) (IEEE)	Conference	Graphic Era Hill University, Dehradun, Uttarakhand, India (Presented/ Under Publication)	4-6 March 2025
[20]	A Hybrid Feature Selection Based Machine Learning Model For Detection Of Motor Faults	7th International Conference on Electronics, Communications, and Control Engineering (ICCEC 2024) (IEEE)	Conference	Kuala Lumpur, Malaysia	March 22-24, 2024
[21]	Metaheuristic Approach for Bearing Fault Prediction	2023 IEEE International Symposium on Smart Electronic Systems (iSES) (IEEE)	Conference	Nirma University, Ahmedabad	18 – 20 Dec 2023
[22]	Efficient condition monitoring of off shore wind turbines using deep networks	International Conference on Computer, Electronics and Electrical Engineering and Their Applications (IEEE)	Conference	NIT Uttarakhand Srinagar Garhwal, Uttarakhand India	June 8th-9th, 2023
[23]	Motor Bearing Fault Prediction Using Artificial Intelligence Techniques	2nd International Conference on Microwave, Optical and Communication Engineering (ICMOCE-2023) (IEEE)	Conference	IIT Bhubaneswar	26-28 May 2023
[24]	Intelligent multiple fault diagnosis for predictive maintenance of induction motor	IEEE Power India International Conference 2022 (IEEE)	Conference	National Institute of Technology Delhi, India	25 - 27 November 2022
[25]	Advance deep convolution neural network for multiple fault diagnosis of induction motor	IEEE Power India International Conference 2022 (IEEE)	Conference	National Institute of Technology Delhi, India	25 - 27 November 2022
[26]	Transfer learning based bearing and rotor fault diagnosis of induction motor	2nd International Conference on Advance Computing and Innovative Technologies in Engineering (ICACITE) (IEEE)	Conference	Galgotias College of Engineering and Technology Greater Noida, India	April 28-29, 2022
[27]	sEMG signal based hand and finger movement classification using different classifiers and techniques: A review	Third international conference on intelligent computing and control systems (ICICCS 2019) (IEEE)	Conference	Vaigai College of Engineering, Vinayagapuram, Therkuthuru, Madurai 625122	15 TH -17 TH May 2019
[28]	A Review of Condition Monitoring and Fault Diagnosis Methods for	International Conference on Intelligent Computing and Control Systems - ICCS 2018	Conference	Vaigai College Engineering Madurai-MelurRoad	June 14-15, 2018

	Induction Motors	(IEEE)		Therkuthuru, Madurai – 625122	
[29]	Bearing Fault Diagnosis Using Weighted K- Nearest Neighbor	International Conference on Trends in Electronics and Informatics 2018 (IEEE)	Conference	SCAD College of Engineering and Technology, Cheranmahadevi, Tirunelveli, TamilNadu, India	May 11-12, 2018
[30]	Analysis on harmonic reduction of six switch converter connected to grid through photovoltaic generation.	National Conference on Innovation in Electrical Engineering	Conference	Madhav Institute of Technology & Science, Gwalior, Madhya Pradesh	February 22, 2014
Summary		Journal 13 (SCI/SCIE/ESCI-6, SCOPUS-7)	Book Chapter 5	Conference 12	Total 30
		Citations: 355	h-index: 10	i10-index : 10	

Awards and fellowships:

1. Young Researcher Award at the International Conference on Advanced Materials and Its Characterisation (ICAMC 2024), organized by REST Labs and the Institution of Engineers India (Hosur Local Centre) at REST Labs, REST Campus, Kaveripattinam, Krishnagiri, Tamil Nadu, India, on the 27th and 28th of December 2024
2. GATE fellowship JRF & SRF (2019-2024)
3. Best Project Award in Bachelor of Technology (B.Tech.)
4. Worked as coordinator in MEDIA CLUB SRMGPC and got BEST CELL AWARD and MOST HARDWORKING CELL award.
5. MERITORIOUS AWARD from HAL SCHOOL CBSE in 2008.
6. MERITORIOUS REWARD from SRMCEM Lucknow in 1st, 2nd, 3rd, 4th year.
7. Second prize in Chess competition at DISTRICT level.

Professional Duties/ Responsibilities Undertaken :

•Conference Technical Committee Member

- 7th International Conference on Electronics, Communications, and Control Engineering (ICCEC 2024), hosted by Xiamen University Malaysia, Kuala Lumpur, Malaysia's, March 22-24, 2024.
- International Conference on Computer Communication, Networks and Information Science (CCNIS 2024), Singapore, October 25-27, 2024
- 2024 International Conference on Intelligent Control and Robotics (ICICR 2024), Seoul, South Korea, December 27 - 29, 2024
- 8th International Conference on Electronics, Communications and Control Engineering Fukuoka Institute of Technology, Fukuoka, Japan | March 28-31, 2025
- The 10th International Conference on Electronics, Communications and Control Engineering Waseda University, Tokyo, Japan | March 18-21, 2027

•Conference Session Chair

- Session Chair / Judge at the 3rd International Conference on Power Engineering and Intelligent Systems (PEIS 2025), organized by National Institute of Technology Uttarakhand, India, 8-9 March 2025 (Springer).
- Session Chair at Cognitive Computing in Engineering, Communications, Sciences and Biomedical Health Informatics (IC3ECSBHI-2026) organised by School of Engineering, Gautam Buddha University, Greater Noida (U.P.), Delhi-NCR, India February 12-14, 2026 (IEEE)

•Expert Lecture Delivered

- Expert Lecture on “Introduction to Machine Learning” in Webinar organised by Sobha Saria Group of Colleges Sikar Rajasthan on 23rd June 2021.

•Session Coordinator

- 1st International Conference on Energy, Materials Sciences and Mechanical Engineering (EMSME - 2020) October 30th - November 01st, 2020.
- 3rd International Conference on Communication and Intelligent Systems (ICCIS 2021) in December 18-19, 2021.
- IEEE Power India International Conference 2022 - PIICON 2022, from 25 - 27 November 2022 at National Institute of Technology Delhi, India.
- International conference on Power Engineering and Intelligent Systems (PEIS2023) during June 24-25, 2023 at National Institute of Technology Delhi
- Session Coordinator in the 2nd International Conference on Power Engineering and Intelligent Systems (PEIS2024) held at National Institute of Technology Uttarakhand, India during 16-17 March 2024.

• Review Committee member

- 2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control December 10-13, 2025 | NIT Goa, India
- 2nd International Conference on Computer, Electronics and Electrical Engineering and their Applications (IC2E3-2024), held from 6th to 7th June, 2024 at National Institute of Technology Uttarakhand, India. IEEE
- 11th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON-2024), from Nov 29th to Dec 1st, 2024, Shri Ramswaroop Memorial College of Engineering & Management Tiwariganj, Ayodhya Road, Lucknow, U.P., India
- International Conference on Innovative Trends in Electrical, Electronics and Bio-Technology Engineering ICITEEB-2024 3rd-4th July 2024 Organized by: Department of Electronics and Communication Engineering Chandigarh University, Gharuan, Mohali, Punjab.

Professional Development activities:**• Webinar Attended:**

- Medical Image processing by Dr. Narendra D. Londhe on 25 July 2020 organised by Department of Electronics and Telecommunication Engineering, R C Patel Institute of technology Shirpur.
- “COMMUNICATION 2.0” held on 4th June 2020 by Vidya Sagar Womens College Madras.
- “SELF ANALYSIS” held on 11th June 2020 by Vidya Sagar Womens College Madras.
- “Emerging Green Technologies for Smart Cities: Challenges and Opportunities” jointly organized by Department of Electrical and Electronics Engineering, RVS College of Engineering and Technology, Coimbatore and NEW HORIZON College of Engineering, Bengaluru from 16/06/2020 to 20/06/2020.
- Understanding the gap between industry dynamics and University Curriculum” organized by Department of Electrical Engineering and Electronics & Communication Engineering Poornima Institute of Engineering and Technology Jaipur on June 3rd ,2020.
- BLOCK CHAIN AN OPPORTUNITY FOR ENERGY PROSUMERS organized by the Department of Electronics and Instrumentation Engineering of EASWARI ENGINEERING COLLEGE on 05th June 2020.
- BE Future Leader- Post COVID-19 organized by the University of Technology on 3-4 June 2020.
- Studies Abroad: Lights of Vision organized by the Sadakathullah Appa College on 6th June 2020.
- National Webinar on Research Methodology and Techniques in Higher Education organized by the Aggarwal College Ballabgarh on 30th June 2021.

•FDP Attended

- AICTE Training And Learning (ATAL) Academy Online Elementary FDP on " Machine Learning Frontiers in Healthcare" from 2021-7-26 to 2021-7-30 at National Institute Of Technology, Delhi.

- AICTE Training And Learning (ATAL) Academy Online Elementary FDP on “Nature Inspired Optimization Techniques” from 2021-7-19 to 2021-7-23 at National Institute of Technology Delhi.
- AICTE Training And Learning (ATAL) Academy Online FDP on "Systems Engineering" from 2020-10-26 to 2020-10-30 at National Institute of Technology Delhi.
- AICTE Training And Learning (ATAL) Academy Online FDP on "Reliability Studies for Engineering Applications" from 2023-02-13 to 2023-02-18 at National Institute of Technology Delhi.
- One day faculty development program on Recent Innovations in Renewable Energy Technologies and Smart Grids organized by Bansal Institute of Engineering and Technology Lucknow from 08 June to 12 June 2020.
- Developing new perspective in the era of AI/ML by MIT Meerut on 30 May to 4 June 2020.
- Recent Research Trends in Electrical Engineering by Gautam Buddha University Greater Noida UP on 14-18 July 2020.
- One day online faculty development program on AI tools for teaching organized by Star International Foundation for Research and Education on 22.06.2024.
 - Two day faculty development program on Artificial Intelligence in Health Care organized by RCPIT Shahpur Educational Society on 10 and 11 June 2020.
- **Conference Attended**
 - A Two day International Virtual Conference 2020 - Global Understanding for Sustainable Development
 - Recent Trends in Renewable Energy and Advancement in Engineering and Technology 2021
- **Seminar Attended**
 - Six Days Seminar on "ARTIFICIAL INTELLIGENCE TECHNIQUES FOR HEALTHCARE APPLICATIONS (AITHA-2023)" from 2023-02-22 to 2023-02-27 at National Institute Of Technology, Delhi.
- **Short Term Course Attended**
 - One Week AICTE recognized Short Term Course on “Communication Skills through ICT” conducted by National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh from 02-06-11-2015

Reviewer of Journals:

S.No.	Journal Name	Publisher	Indexing
1	IEEE Transactions on Industrial Electronics	IEEE	SCIE
2	IEEE Transactions on Industrial Informatics	IEEE	SCIE
3	IEEE Transactions on Power Electronics	IEEE	SCIE
4	IEEE Sensors Journal	IEEE	SCIE
5	IEEE Open Journal of Industry Applications	IEEE	SCIE
6	International Transactions on Electrical Energy Systems	Wiley	SCIE
7	Engineering Applications of Artificial Intelligence	Elsevier	SCIE
8	Expert Systems with Applications	Elsevier	SCIE
9	Measurement	Elsevier	SCIE
10	Part A: Journal of Power and Energy	SAGE	SCIE

Areas of Interests:

- Artificial Intelligence and Machine Learning Applications to Electrical Engineering
- Electrical Machine Condition Monitoring and Fault Diagnosis
- Instrumentation, Signal processing and Image Processing
- Intelligent Predictive Maintenance and Prognostics (Electric Vehicles and EV Powertrain)

Personal Dossier:

Date of birth: 16-12-1991
Gender: MALE
Office address: Room 418, Electrical Engineering Department SVNIT Surat, Gujarat
Permanent Address: R-25 Sanjay Gandhi Puram Faizabad Road Lucknow Uttar Pradesh 226016, India

References:

S.No.	Name	Designation	Contact
1	Prof. Vivek Shrivastava	Dean and Professor Electrical Engineering Department National Institute of Technology (NIT) Uttarakhand, India	8800681277, shvivek@nituk.ac.in
2	Prof. S Fatima	Associate Professor Center for Automotive Research and Tribology (CART), Indian Institute of Technology (IIT) Delhi India	9811045694, fatima@iitd.ac.in
3	Dr. Ritula Thakur	Head of Department and Associate Professor Electrical Engineering Department National Institute of Technical Teachers Training and Research (NITTTR), Chandigarh, India	6283079912, ritula@nitttrchd.ac.in

Declaration: I, hereby declare that above information furnished by me is true and correct to the best of my knowledge and belief.

Date: 16/09/2026

Place: **Surat, India**