Dr. Rashel Sarkar

Associate Professor

Computer Science & Engineering

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IMMEDIATE OBJECTIVE:

Intend to build a career in a leading teaching/research organization, with committed & dedicated people, which will help me to explore myself fully and realize my potential. Willing to work as a key player in a challenging & creative environment, to bridge the gap between academia and industry, and thus cater the needs of society

RANGE OF EXPERIENCE:

18 years of total Teaching and Administrative Experience.

EMPLOYEMENT HISTORY:

Designation	Institution	Period
Associate Professor	Department of Computer Science and Engineering Royal Global University, Assam	September 2023- Till
Associate Professor	Department of Computer Science and Engineering Regional Institute of Science and Technology, Meghalaya	August 2021- August 2023
Assistant Professor	Department of Computer Science and Engineering Regional Institute of Science and Technology, Meghalaya	Jan 2018- July 2021
Assistant Professor	Department of Computer Science and Engineering P.A. College of Engineering Mangalore, Karnataka	June 2012 - Jan 2018
Assistant Professor	ALVA's Institute of Technology (Mangalore), Karnataka.	Jan 2012 to June 2012
Lecturer	H.M.S Institute of Technology (Tumkur), Karnataka.	Jan 2008 to Jan 2012
Lecturer	Raja Rajeswari College of Engineering (Bangalore), Karnataka.	May 2006 to Jan 2008

ACADEMICS:

Degree	Specialization	Year
Ph.D	Computer Science	2021
M.Tech	Computer Science & Engineering	2012
B.Tech	Computer Science & Engineering	2006
12th	Science, Math	2002
10th	-	2000

OTHER ADMINISTRATIVE POSTS HELD:

Designation	Institution	Period
On Special Duty(OSD)	Education Research and Development Foundation (ERDF)	Jan 2020- August 2023
Finishing School Coordinator	Regional Institute of Science and Technology, Meghalaya	Jan 2018- August 2023
Hostel Warden and Student Welfare Officer	H.M.S Institute of Technology (Tumkur), Karnataka.	Jan 2008 to Jan 2012
Non-Residential Hostel Warden	P.A. College of Engineering Mangalore	Oct 2015 – Jan 2018

PUBLICATIONS:

International Scopus/ Journal

1. Dr. Rashel Sarkar" Medical Image Analysis of Knee Osteoarthritis using Modified Deep CNN", Journal of Survey in Fisheries Sciences 10(2S) 133-144 2023, **ISSN**: 2368-7487, Cite Score 1.0, **SCOPUS Q3.**

2. Dr. Rashel Sarkar "An Efficient Parallel Clustering Algorithm on Big Data using Spark" in Journal of East China University of Science and Technology **ISSN** 1006-3080, **ELSEVIER SCOPUS** Cite Score 0.3. VOL.65 ISS. 2 2022, 535-547

3. Dr. Rashel Sarkar "Multi-Feature Learning Model for Epilepsy Classification Supervised by a High Robust Heterogeneous Deep Ensemble" in Turkish Journal of Computer and Mathematics Education (**TURCOMAT**), **e-ISSN** 1309-4653, **SCOPUS**. Vol.13 No.02 (2022), 273-284

4. Dr. Rashel Sarkar "An Investigation on Epileptic Seizure Classification Using Machine Learning and Multiple Feature" Selection Strategies in 3rd International Conference of Emerging Technology (INCET 2022) during 27th to 29th May 2022. **IEEE Bangalore Section**. DOI: 10.1109/INCET54531.2022.9824799

5. Dr. Rashel Sarkar "A spark-based parallel fuzzy c median algorithm for web log big data" in International Journal on "Technical and Physical Problems of Engineering" (**IJTPE**) Published by International Organization of IOTPE, **ISSN** 2077-3528, **SCOPUS,** Cite Score 1.2, September 2022 Issue 52 Volume 14 Number 3 Pages 212-220

6. Dr. Rashel Sarkar ""An artificial intelligence based approach for recognizing ovarian cancer using combined krill herd and grey wolf Optimization" European Chemical Bulletin E- ISSN:2063-5346, page- 1278- 1290, Cite Score 1.6, **SCOPUS INDEX,** DOI: 10.31838/ecb/2023.12.si6.1202023.30/05/2023.

7. Dr. Rashel Sarkar " Neuro Linguistic Programming : An Effective Tool for Teaching of English as a Second Language", **International Journal** of Scientific Research in Science and Technology (IJSRST), **Online ISSN** : 2395-602X, **Print ISSN** : 2395-6011, Volume 10 Issue 1, pp. 529-536, January February 2023. Available at doi : https://doi.org/10.32628/IJSRST2310172 Journal URL https://ijsrst.com/IJSRST2310172

8. Dr. Rashel Sarkar" Tomato Leaf Disease Recognition-A Critical Review" , Journal of Data Acquisition and Processing, Cite Score 0.7, Vol. 38 (1) 2023 page- 4388-4397, ISSN: 1004-9037, **SCOPUS,** https://sjcjycl.cn/ DOI: 10.5281/zenodo.7766137

9. Debabrat Bharali, Dr.Rashel Sarkar "Drawbacks Of Dataset For Tomato Leaf Diseases Recognition" Journal of Namibian Studies, 35 S1 (2023): 3551-3559 ISSN: 2197-5523 (online),Cite Score 0.5,**Published** Aug10,2023,**SCOPUS,**
    DOI https://doi.org/10.59670/jns.v35i.4245.

10. Dr. Rashel Sarkar "A Non-Classical Approach in Analyzing Student's Performance in Academics Using Fuzzy Logic" Tuijin Jishu/Journal of Propulsion Technology ISSN: 1001-4055 Vol. 44 No. 3 (2023),page: 3542-3549 SCOPUS Cite Score 1.1,**Published** Nov 2023,**SCOPUS, DOI:** https://doi.org/10.52783/tjjpt.v44.i3.2065

11. Dr. Rashel Sarkar "A non-classical approach in selection of a feasible candidate for contesting in an election using fuzzy logic" Journal Business, Management and Economics Engineering, ISSN: 2669-2481Vol. 21 No. 2 (2023), page: 642-649 SCOPUS Cite Score 2.1, **Published** Dec 2023, **SCOPUS.**

12. Rashel Sarkar & Dr. Harsh Kumar "A critical study of the Development of Data Mining Models for technical Domain of Manpower" in International Journal IT and Engineering (IJMRA Publications) ISSN: 2249-0558 **UGC approve no 46823.**

13. Rashel Sarkar & Dr. Harsh Kumar "Growth of Data Mining Models for the Technical Domain of Manpower "RESEARCH REVIEW International Journal of Multidisciplinary May-2019 www.rrjournals.com[**UGC Listed Journal]** Volume-04 ISSN: 2455-3085 Issue-05

14. Rashel Sarkar & Dr. Harsh Kumar "A Study of Design and Development of Data Mining Models for the Technical Domain of Manpower" in RESEARCH REVIEW International Journal of MultidisciplinaryVolume-04 ISSN: 2455-3085 Issue-05 May-2019, www.rrjournals.com[**UGC Listed Journal**]

15. Rashel Sarkar, Hemavathy R. and Dr. Shobha G. "An Invisible Watermarking Technique for Image Verification" in **International Journal** of Emerging Technology and Advanced Engineering (ISSN 2250-2459), Volume 2, Issue 3, March 2012.

16. Rashel Sarkar and Sameema "A Survey of Digital Video watermarking" on **International Journal** of Computer Science and Application - TIJCSA (ISSN-2278-1080) in Vol-01- NO-02 - Apr-12 issue Page 49-54

17. Mr. Rashel Sarkar and Ms. Smitha Ravi "A Survey of Digital Image Watermarking Based on different Techniques" in **International Journal** of Emerging Technology & Advanced Engineering (ISSN2250- 2459, ISO 9001:2008 Certified Journal), Volume 3, Issue 10, October 2013

18. Aurea Tanya, Rashel Sarkar,"Secure Dynamic Bandwidth Allocation to Reduce Rerouting Time in MANET" at Volume 5, Issue 6, June 2015 in **International Journal** of Advanced Research in Computer Science and Software Engineering Research Paper

International Conference Papers:

1. Rashel Sarkar & Dr. Harsh Kumar "A Data Mining tool for predicting for the technical field of Manpower" **International conference** on recent Innovation in Engineering Science and Management (RIESM) ISBN: 978-81-943584-3-5.

2. Rashel Sarkar & Dr. Harsh "Analysis of the technical field of manpower of data mining model" **International conference** on recent Innovation in Engineering Science and Management (RIESM) ISBN: 978-81-943584-3-5.

3. Mr. Rashel Sarkar, Mrs.Yasmeen Taj M Mrs. Hemavathy R. Dr. Shobha G. Dr. N.K. Srinath "Invisible Image Watermarking with Digital Design" in **International Conference** on Emerging Technological Trends in Advanced Engineering Research [ICETT 2012], 2012 February 20-21.

4. Rashel Sarkar, A research paper on "An invisible logo watermarking using high robust algorithm for digital design" in **International Conference** in Emerging Trends in Engineering [ICETE'12], 2012 May 15th and 16th.

5. Vidhya.V, Rashel Sarkar "Invisible Video Watermarking is using Singular Value Decomposition, Discrete Wavelet Transform and Chaotic Encryption" at the **International Conference** on Recent Innovations in Electrical, Electronics and Computer Engineerin (ICEECE) held at Bangalore on 01st June 2014.

6. Rashel Sarkar, Dr. G.R. Sakthidharan, Dr. Y.S Kumarswamy "A Survey of Skin Condition Evaluation using Image Processing" in 2nd International Conference on Applied and Theoretical Computing and Communication Technology(iCATccT) 978-1-5090-2399-8/16 2016 IEEE.

National Conference Papers:

1. Mr. Rashel Sarkar, Mrs. Hemavathy R. , Dr. Shobha G "Invisible Robust Watermarking with Digital Design" in **National Conference** on Neoteric Trends for Computing and Communication – NTCC'12, 22nd March 12.
2. Rajeev Kumar, Mr. Rashel Sarkar" Bus Tracking System using wireless Technology" on **National - Conference** on Emerging Trends in Technology NCET-TEC.

PATENT PUBLISH:

1. Title of the invention: "Stock Market Prediction Using Artificial Neural Networks in Python" PATENT APPLICATION PUBLICATION (21) **Application No.202231052415** A (19) INDIA.
   https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

2. Title of the invention: "Artificial Intelligence and Deep Learning based Driverless Cars to reduce the road accident, Death Rate using Python" PATENT APPLICATION PUBLICATION (21) **Application No.202231053304** A (19) INDIA.
   https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

3. Title of the invention: "Cloud Based IOT Smart and Accurate Traffic Monitoring System in Real Time Applications for Developed Countries to Reduce Traffic Related Issues" PATENT APPLICATION PUBLICATION (21) **Application No.202211056454** A (19) INDIA.
   https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

4. Title of the invention : "Exact Prediction and Consumption of Residential Electricity Power cost hours, daily, weekly, monthly using ANT, ML and DL Techniques" PATENT APPLICATION PUBLICATION (21) **Application No.202241055650** A (19) INDIA.
   https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

5. Title of the invention : "Artificial intelligence techniques and big data analytics based digital document fraud detection system using Internet of Things (IoT) enabled machine learning things in finance and economic industry" PATENT APPLICATION PUBLICATION (21) **Application No.202231060096** A (19) INDIA.
   https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

6. Title of the invention: "Financial Fraud Apps Detection by using data mining optimization techniques with Machine learning" PATENT APPLICATION PUBLICATION (21) **Application No.202231063461** A (19) INDIA.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

7. Title of the invention: "Artificial Intelligence and Deep Learning Algorithms to Detect and Prevent Malware in Cyber Security" PATENT APPLICATION PUBLICATION (21)**Application No. 202211063681**A (19) INDIA.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

8. Title of the invention: "A New Novel Framework to Analyze and Detect the MRI based Brain Tumors and Alzheimer's by using Convolution Neural Network" PATENT APPLICATION PUBLICATION, **Application No.** 202331070252 INDIA.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

9. Title of the invention: "A hybrid approach for analyzing of early-stage detection and prevention of lung cancer using advanced machine learning and deep learning algorithms" PATENT APPLICATION PUBLICATION, **Application No.** 202331082502 INDIA.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

10. Title of the invention: "PLANT LEAF DISEASE DETECTION USING COMPUTER VISION AND MACHINE LEARNING ALGORITHMS" PATENT APPLICATION PUBLICATION, **Application No.** 202431001745 INDIA.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

11. Title of the invention: "NANOPARTICLES BASED CANCER MEDICATION DEVICE" PATENT APPLICATION PUBLICATION, **Application No.** 202331085356 INDIA.
https://ipindiaservices.gov.in/PatentSearch/PatentSearch/ViewApplicationStatus

PATENT GRANT:

1. Title of the invention: "Intelligent Sensor Based Biodegradable Waste Collection" Design number: 6268246, **GRANT DATE**: 21 March 2023,
https://www.registered-design.service.gov.uk/find/6268246, **UK based Patent.**

2. Title of the invention: "ML and AI Based Device for Skin Cancer Detection" Design number: 6328989, **GRANT DATE**: 2 December 2023,
https://www.registered-design.service.gov.uk/find/6328989, **UK based Patent.**

3. Title of the invention: "AI Chemical Mixing Device for Agriculture**"** Design number: 6335750, **GRANT DATE**: 22 January 2024, **https://www.registered-design.service.gov.uk/find/6328989, UK based Patent.**

4. Title of the invention: "AI Based Seed Sowing Machine for Nursery**"** Design number: 402915-001, **GRANT DATE**: 22 December 2023, **https://search.ipindia.gov.in/DesignApplicationStatus INDIA based Patent**

BOOKS PUBLICATIONS:

1. Artificial Intelligence: Modern Perspectives and Practices with **ISBN-13:978-93954680088. https://www.amazon.in/dp/9395468009?ref=myi_title_dp**

2. **Data Analysis Using R Programming with ISBN- 978-93-5757-751-9 by** Scientific International Publishing House, Registered Under the Ministry of SME, Government of India

3. **Fundamentals of Data Mining and Analysis with ISBN- 978-93-6132-937-1 by** Scientific International Publishing House, Registered Under the Ministry of SME, Government of India

BOOKS CHAPTER PUBLICATIONS:

1. "Efficient Anomaly Detection for Empowering Cyber Security by Using Adaptive Deep Learning Model" **Springer, Singapore.** Print ISBN978-981-99-2114-0 , Published14 June 2023 https://doi.org/10.1007/978-981-99-2115-7_11

2. "A Novel Ensemble Methodology to Validate Fuzzy Clusters of Big Data" **Springer Nature** Singapore Pte Ltd. 2023, Proceedings of the Fourth International Conference on Trends in Computational and Cognitive Engineering, Page-267- 278

3. "A Survey on Technological Advancements of Scalable Computing Tools and Paradigms" Futuristic Trends in Computing Technologies and Data Sciences **ISBN: 978-81-959356-3-5** IIP Proceedings, Volume 2, Book 18, Part 7, Chapter 2

4. "Big Data Analytics and Decision Making: Techniques, Technologies and Challenges" Futuristic Trends in Computing Technologies and Data Sciences **ISBN: 978-81-959356-3-5** IIP Proceedings, Volume 2, Book 18, Part 1, Chapter 3

PROFESSIONAL MEMBERSHIP:

- Life Member of Indian Society for Technical Education(ISTE): M. No-LM 80425

PhD GUIDANCE:

PhD	Number of Candidates	Status
	01	On-Going
Sl No.	**Name of Candidate**	**Thesis Title**
1	Mr Debabrat Bharali	Identification of Different Types of Tomoto Leaf Diseases Using Deep Learning Techniques

PROJECT GUIDANCE:

UG/PG	Number of Candidates	Status
UG	150	Completed
UG	4	Ongoing
PG	8	Completed

DETAILS OF GOVERNMENT PROJECT GRANTED AND WORKED:

1. "Installation of solar power project at regional institute of science and technology, Meghalaya" a project on all India council for technical education (AICTE) special scheme for the north east to improve the basic needs of technical institutions

2. "Low Cost Hygiene and Sanitization Solution" A project on NewGen Innovation and Entrepreneurship Development- DST S EDII Ahmedabad

3. "A Machine Learning based COVID-19 Dashboard" A project on CSIR-Summer Research Training Program 2020

4. "Vehicle classification and Speed Estimation" A project on NewGen Innovation and Entrepreneurship Development- DST S EDII Ahmedabad

PERSONAL PROFILE:

Name   : Dr Rashel Sarkar

Date of Birth   : 18.06.1983

Place of Birth : Kakripara, Assam

Father's name   : Abdus Sahid Sarkar

Marital Status : Married

Languages Known : English, Hindi, Assamese and Bengali

Nationality   : Indian

Permanent Address   : Kakripara, South Salmara Mankachar-783131, Assam India

Dr. Rashel Sarkar

Place: Guwahati

Date: