<div align="center">**RESUME**</div>

Name: Dr. Raksha Sharma
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Google Scholar:
https://scholar.google.co.in/citations?hl=en&user=V9oafzsAAAAJ&view_op=list_works&sortby=pubdate

Education Qualification

Ph.D. from Indian Institute of Technology Bombay in the area of Natural Language Processing (NLP) and Machine Learning from January 2012 till November 2017.

M.Tech. from Indian Institute of Information Technology and Management, Gwalior in 2009.

B.Tech. from Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal in 2006.

Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title - Exploiting Word Properties for Sentiment Analysis
Guide's Name - Prof. Pushpak Bhattacharyya (Professor, Computer Science and Engineering)
Institute - Indian Institute of Technology, Bombay, India
Year of Award - 2017

Current Positions

Associate Professor in the Department of Computer Science and Engineering, IIT Roorkee

Joint Faculty at Center of Indian Knowledge System, IIT Roorkee from January 2024 till date.

Non-executive director at Urja Analytics Private Limited with 50% equity shares.

Areas of Research

Natural Language Processing, Speech Processing for Language Generation, Applied Machine Learning, Computational Linguistics for Indian Knowledge

Experience

Assistant Professor in the Computer Science Department of Indian Institute of Technology (IIT), Roorkee, India, from January 2019 till date.

Research scientist at Tata Research Design and Development Center (TRDDC), India from October 2017 till December 2018. Here I worked on information extraction in the biomedical domain.

Lecturer in the Department of Computer Science & Engineering at Jaypee University (Deemed University), Guna, M.P. from 6th July 2009 till 6th January 2012. (2 Years and 6 Months)

Intern at Xerox Research Center of India (XRCI) from June 2015 till December 2015 (7 Months).

Adjunct faculty for Machine Learning at Aegis School of Business, Data Science, Cyber Security & Telecommunication from September 2017.

Research Projects at IITR

a. Information Extraction in Biomedical Domain

b. Computational linguistics for Indian Languages and knowledge,
c. Information Extraction from Mythological Scriptures, and AI for Ayurveda Practices
d. Domain adaptation for Sentiment Analysis
e. Hate/fake Speech/news Detection on Social Media
f. LLMs
g. Text generation for Remote Sensing Images
h. PV power prediction using ML
i. Summarization in News Domain
j. NLP for code-mixed data
k. Trade-off between Computer architecture and NLP Algorithms
l. NLP in legal domain

Teaching Assignments at IITR
a. Machine Learning
b. Natural Language Processing
c. Data Structures
d. Artificial Intelligence
e. Theory of Computation

Programming Skills
Python, Keras and Tensorflow for Deep Learning, Java, C++, NLP Tools like NLTK, etc.

Academic Memberships
Reviewers/Program Committee member/Area Chair for top NLP Conferences from 2018 till date:
ACL, EMNLP, IJCNLP, COLING, NAACL, ECIR, IJCNN

Research Collaborations (in India and abroad)

1. Prof. Ilija Batas Bjelic, Institute of Technical Sciences of SASA, Serbia
2. Prof. Adway Mitra, CSE, IIT Kharagpur
3. Prof. Rhythm Singh, Hydrology, IIT Roorkee
4. Prof. Pravindra Kumar, Biotechnology, IIT Roorkee
5. Prof. Rajesh Sharma, University of Tartu, Estonia
6. Prof. Holli A Semetko, Emory University, USA
7. Dr. Sachin Pawar, TRDDC Pune
8. Dr. Rudra Murthy, IBM Research Bangalore
9. Prof. Parth Sharma, UPES Dehradun
10. Prof. Chenhui Chu, Kyoto University

Doctoral (Ph.D.) thesis Supervision at IITR

Name of the Scholar	Month & Year of admission	Title of the thesis	Supervision (Singly/ Jointly)	Status
Mr. Swadhin Das	July 2020	Remote-Sensing Image Captioning	Singly	**Thesis submitted**
Mr. Prabhjot Singh	January 2021	Hate Speech Detection	Singly	Ongoing
Mr. Yash Singhal	July 2022	NLP for Computer Architecture	Jointly with Prof. Debiprasanna	Ongoing

			Sahoo, IIT Bhubaneswar	
Miss Dipali Kadam	July 2025			Ongoing
Miss Urvashi	July 2025			Ongoing

MTech Thesis Supervised

Title of the thesis	Year	Name of the student	Singly/ Jointly
Summarization in News Domain	2019	Tulesh Jaiswal	Singly
Multimodal Sentiment Analysis	2020	V. Janeefa	Singly
Information Extraction	2020	Deependra Singh	Singly
Image Captioning	2020	Aman Jain	Signly
Drone Data Analysis	2020	Ankur Gaur	Jointly (with Prof. P. M Pathak)
Sentiment Analysis	2021	Kartik Sharma	Singly
Information Extraction	2021	Swapnil Naik	Singly
Named Entity Recognition	2021	Anunay Katare	Singly
Information Extraction in Legal Domain	2022	Arihant Jain	Singly
Caption Generation for Medical Images	2023	Sagar Sharma	Singly
Information Extraction in Biomedical Domain	2023	Biswanath Das	Singly
Radiology Report Summarization	2025	Nilotpal Goyal	Singly
Questions Complexity Prediction	2025	Bandaru Tulasi	Singly

Sponsored Research projects submitted/approved/completed

SI. No.	Title of the project	Your role	Sponsoring agency	Budget	Start Date	Status
1	Information Extraction in Biomedical Domain	PI	IIT Roorkee	18.5 Lacs	March 2020	Completed on March 2022
2	Qualcomm Innovation Fellowship for Integration of NLP with Computer Architecture	PI	Qualcomm	11 Lacs	July 2023	Ongoing
3	Machine Learning for PV power Forecasting	PI	DST (Technology Innovation Hub, Roorkee)	26 Lacs	January 2022	Completed on December 2024
4	IBM Research Bangalore	PI	IBM Research	4.5 Lacs	June 2024	Ongoing

SI. No.	Title of the project	Your role	Sponsoring agency	Budget	Start Date	Status

1	AI-Powered Language Processing Tools for Sanskrit: Understanding, Generation and Translation	Co-PI	Uttarakhand Sanskrit University	10 Lacs	10th April 2025	Ongoing
2	Machine-learning based PV power forecast in diverse climatic zones across Serbia and India	Co-PI	India-Serbia Gov.	25 Lacs	July 2023	Ongoing
3	P2P Trading Platform for PV Power using Blockchain Technology	Co-PI	TIH IIT Bhilai, DST	48 Lacs	4th April 2023	Running

Consultancy projects

Title of the project	Sponsoring Agency	Your role (sole PI/PI/Co-PI)	Amount	Start Date	End Date
PG Certification Program on Data Science with CloudXLab and CEC IITR (Completed)	CLOUDXLAB, ISSIMO	PI	12 Lacs	05-09-2021	31-03-2024
PG Certification Program on Deep Learning with CloudXLab and CEC IITR (Completed)	CLOUDXLAB, ISSIMO	PI	12 Lacs	05-09-2021	31-03-2024
PG Certification Program on MLOps with CloudXLab and CEC IITR (Completed)	CLOUDXLAB, ISSIMO	PI	1 Lac	05-09-2021	31-03-2024
AI & DEEP LEARNING FOR IRDE DEHRADUN SCIENTISTS	IRDE, Dehradun	PI	6 Lacs	06-May-2024	04-02-2025
CERTIFICATE COURSE ON ARTIFICIAL INTELLIGENCE AND DEEP LEARNING	CloudXLab	PI	10 Lacs	July 2022	December 2024
Advanced Certification Program on Machine Learning and Data Science with CloudXLab and EICT - IITR (Completed)	CloudXLab	Co-PI	10 Lacs	2021	2022

Publications *(List of papers published in SCI Journals/CORE&ERA ranked conferences/workshops, in year wise descending order).*
The complete list of publications is available at -

Journal Papers

Author(s)	Title	Name of Journal/Conference	Volume	Page	Year
Das, Swadhin, and Raksha Sharma*	A TextGCN-Based Decoding Approach for Improving Remote Sensing Image Captioning.	*EEE Geoscience and Remote Sensing Letters* (2024). H-Index: 149, Impact Factor: 4, Quartile: Q1	22	1558-0571	2024
A. Rathore, P. Gupta, R. Sharma, R. Singh*,	Day ahead solar forecast using long short term memory network augmented with fast fourier transform-assisted decomposition technique	Renewable Energy H-Index: 18.4, Impact Factor: 9, Quartile: Q1	247	123-021	2024
Chakraborty, Abhik, and Raksha Sharma*	A deep crystal structure identification system for X-ray diffraction patterns	The Visual Computer (TVC) Journal SJR Ranking - Q2	38	1275-1282	2021
Pawar, Sachin, Raksha Sharma, Girish Keshav Palshikar, Pushpak Bhattacharyya, and Vasudeva Varma	Cause–Effect Relation Extraction from Documents in Metallurgy and Materials Science	Transactions of the Indian Institute of Metals Journal	78	2209-2217	2019

Conference Papers: My research area, that is Natural Language Processing, is having more competitive and reputed conferences (by ACL, SIGIR) than journals. Hence, my students have more papers in conferences than journals.

Author(s)	Title	Name of Conference	Volume	Page	Place	Year

Authors	Title	Conference	Vol/No	Pages	Location	Year
Pavan Sai, Vishwanath, Karthik, Ashish Mittal, Raksha Sharma*	A Hybrid Language Model for Code-mixed Sentiment Analysis	Empirical Methods in Natural Language Processing (EMNLP 2025) CORE Ranking - A*	November 2025	-	Suzhou, China	To be Held In November 2025
S. Das, A. Khandelwal and R. Sharma*	Unveiling the Power of Convolutional Neural Networks: A Comprehensive Study on Remote Sensing Image Captioning and Encoder Selection	*International Joint Conference on Neural Networks (IJCNN)*, Yokohama, Japan, 2024 Core Ranking - B Era Ranking - A	12	2161-4393	Japan	2024
Jain Arihant, Raksha Sharma*	Enhancing Legal Named Entity Recognition Using RoBERTa-GCN with CRF: A Nuanced Approach for Fine-Grained Entity Recognition	European Conference on Information Retrieval (ECIR 2024) Core Ranking - A	46	261-267	UK	2024
Sharma Gagan, R Chinmay, Raksha Sharma*	Late Fusion of Transformers for Sentiment Analysis of Code-Switched Data	Empirical Methods in Natural Language Processing (EMNLP 2023) CORE Ranking - A*	26	6485–6490	Singapore	2023

Miglani, Piyush, Pranav Vatsal, and Raksha Sharma*	Leveraging Small-BERT and Bio-BERT for Abbreviation Identification in Scientific Text	International Conference on Applications of Natural Language to Information Systems (NLDB) ERA Ranking - B	28	566-576	UK	2023
Sharma, Raghav, Deependra Chauhan, and Raksha Sharma*	Named Entity Recognition System for the Biomedical Domain	International Conference on Computer Science and Intelligence Systems (FedCSIS) CORE Ranking - B	17	837-840	Australia	2022
Amish Garg, Tanav Shah, Vinay K Jain, Raksha Sharma*	CrypTop12: A Dataset For Cryptocurrency Price Movement Prediction From Tweets And Historical Prices	IEEE International Conference on Machine Learning and Applications (ICMLA) Core Ranking - B	20	379-384	USA	2021
Sharma, Raksha*, and Girish Palshikar	Virus Causes Flu: Identifying Causality in the Biomedical Domain Using an Ensemble Approach with Target-Specific Semantic Embeddings.	In International Conference on Applications of Natural Language to Information Systems (NLDB) Core Ranking - C ERA - B	26	93-104	Germany	2021

Chakraborty, Abhik, and Raksha Sharma*	See Deeper: Identifying Crystal Structure from X-ray Diffraction Patterns	International Conference on Cyberworlds (CW) Core Ranking - B	20	49-54	France	2020
S Sangawan, R Sharma*, G K Palshikar	Cold is a Disease and D-cold is a Drug: Identifying Biological Types of Entities in the Biomedical Domain. In International Conference on Computational Linguistics and Intelligent Text Processing	Computational Linguistics and Intelligent Text Processing (CICLing) CORE Ranking - B	20	49-60	France	2019
Sharma, Raksha, Pushpak Bhattacharyya, Sandipan Dandapat, and Himanshu Sharad Bhatt	Identifying transferable information across domains for cross-domain sentiment classification	Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (ACL) CORE Ranking - A*	58	968-978	Australia	2018
Sharma, Raksha, Girish Palshikar, and Sachin Pawar	An Unsupervised Approach for Cause-Effect Relation Extraction from Biomedical Text	International Conference on Applications of Natural Language to Information Systems, Springer, Cham (NLDB)	24	419-427	France	2018

Author	Title	Conference	Vol/No	Pages	Country	Year
Sharma, Raksha, Dibyendu Mondal, and Pushpak Bhattacharyya	A Comparison Among Significance Tests and Other Feature Building Methods for Sentiment Analysis: A First Study." In International Conference on Computational Linguistics and Intelligent Text Processing	International Conference on Computational Linguistics and Intelligent Text Processing, Springer Cham (CICLing)	18th	3-19	Hungary	2017
Sharma, Raksha, Arpan Somani, Lakshya Kumar, and Pushpak Bhattacharyya	Sentiment intensity ranking among adjectives using sentiment bearing word embeddings	International Conference on Empirical Methods in Natural Language Processing (EMNLP) CORE Ranking - A*	12	547-552	Denmark	2017
Sharma, Raksha, and Pushpak Bhattacharyya	Domain sentiment matters: A two stage sentiment analyzer	International Conference on Natural Language Processing (ICON)	12	130-137	India	2015
Sharma, Raksha, Mohit Gupta, Astha Agarwal, and Pushpak Bhattacharyya	Adjective intensity and sentiment analysis	Conference on Empirical Methods in Natural Language Processing (EMNLP) CORE Ranking- A*	10	2520-2526	Portugal	2015

Sharma, Raksha, and Pushpak Bhattacharyya	A sentiment analyzer for hindi using hindi senti lexicon	International Conference on Natural Language Processing (ICON)	11	150-155	India	2014
Sharma, Raksha, and Pushpak Bhattacharyya	Detecting Domain Dedicated Polar Words	International Joint Conference on Natural Language Processing (IJCNLP) CORE Ranking - A	6	661-666	Japan	2013

Workshop Papers in ACL Associated Venues

Kancharla, Bharath, Prabhjot Singh, Lohith Bhagavan Kancharla, Yashita Chama, and Raksha Sharma	Identifying Aggression and Offensive Language in Code-Mixed Tweets: A Multi-Task Transfer Learning Approach	Workshop on Natural Language Processing for Indo-Aryan and Dravidian Languages	1	122-128	Abudhabi	2025
Macharla, Sri, Ashok Madamanchi, and Nikhilesh Kancharla, Raksha Sharma*	Abstractive Summarization of Radiology Reports using BART Fine Tuning	The 22nd Workshop on Biomedical Natural Language Processing and BioNLP Shared Tasks	22	541-544	Toronto	2023
Venkat praneeth Reddy, Pinnapu Reddy Harshavardhan Reddy, Karanam Sai Sumedh, Raksha Sharma*	Lay Summarization of BioMedical articles using Transformers	The 22nd Workshop on Biomedical Natural Language Processing and BioNLP Shared Tasks	22	625-628	Toronto	2023

Gagan Sharma, Gajanan Sunil Gitte, Shlok Goyal, Raksha Sharma*	Misogyny identification using transformers	16th International Workshop on Semantic Evaluation (semEval 2022)	16	728-732		2022
Himil Vasava, Pramegh Uikey, Gaurav Wasnik, Raksha Sharma*	Transformer-based architecture for empathy prediction and emotion classification	Workshop on Computational Approaches to Subjectivity, Sentiment & Social Media Analysis	12	261-264	Thailand	2022
Gupta Vansh and Raksha Sharma*	Roberta model with data augmentation for persuasion techniques detection	International Workshop on Semantic Evaluation (SemEval-2021)	15	1061-1067		2021
Mondal Anik and Raksha Sharma*	A deep neural system to detect humor and offense with their ratings in the text data	15th international workshop on semantic evaluation (SemEval-2021)	15	1169-1174		2021

Patent

S.No	Patent Title	Name of Applicant(s)	Patent No.	Award Date	Agency/Country	Status
1	METHOD AND SYSTEM FOR TRAINING A TARGET DOMAIN CLASSIFIER TO LABEL TEXT SEGMENTS	Raksha Sharma, Sandipan Dandapat, Himanshu Sharad Bhatt	15/259541	03/08/2018	United States Patent	Awarded
2	A SYSTEM AND METHOD FORECASTING FOR SOLAR PHOTOVOLTAIC POWER USING MACHINE-LEARNING	Rhythm Singh, Raksha Sharma, Abhijeet Rathore, Priya Gupta	202311059664 (Application Number)	05/09/2023	Indian	Filed

Invited Talks and Lectures:

1. Expert lecture on "Recent Trends in Deep Learning and Large Language Models" from Oct 09 - Oct 13 2023 conducted by Chitkara University.

2. Expert Lectures in a short-term course on Deep Learning from 03 June to 08 June 2023 conducted by NIT Kurukshetra.

3. Expert lectures in DST-STUTI Project entitled "Development of Mathematics proficiency in North-East India" conducted by NIT Agartala from 20th to 26th June 2023.

4. Guest Lecture in Graphic Era Hill University on 10th June, 2023.

5. Invited Panel Member for discussion on 'AI and Its impact' in IITR Alumni meet conducted by Lucknow Chapter on 24th Feb 2024.

6. Guest speaker for a national conference on Indian Traditional Knowledge Systems by SAVEETHA School of Law, on 20th Feb 2025.

7. Speaker in a 2-week Online Faculty Development Program on "Natural Language Processing with Deep Learning (NLPDL-2025)" from 24.06.2025 to 01.07.2025 conducted by NIT Jamshedpur in collaboration with E&ICT Academy, NIT Patna funded by Ministry of Electronics and IT, Govt. of India.

Administrative Engagements at Department level and Institute Level
- Founding committee member for academic and curriculum related matters for Mehta Family School of DS and AI.
- Nominated by Dean SRIC as member of BoG of Shivalik College of Engineering.
- Department Coordinator for Gender Advancement for Transforming Institutions (GATI) from November 2021 till June 2023 (A project by DST).
- Member of International Academic Program Committee (InIAPC), CSE till December 2022.
- Member of Department Faculty Search Committee (DFSc) from July 2022 till December 2023.
- Convener of the Department Faculty Search Committee (DFSc) from January 2024 till date.
- Convener of the International Academic Program Committee, CSE from January 2024 till May 2025.
- BTech Project Coordinator in CSE from 2019 till date.
- Ranking data and Annual Report coordinator, CSE from 2021 till date.
- Member of DAPC/DRC on alternate basis from 2019.
- Member of DAC from January 2025.
- Member of DRC in the Center of Indian Knowledge System from January 2024.

Miscellaneous
- Facilitated MoU signing between Institute of Technical Sciences of SASA (Serbian Academy of Sciences and Arts), Belgrade, Serbia and IITR through Dean IR, IIT Roorkee. //Based on the outcome of our India-Serbia project.
- Serving as active reviewer in ACL associated A and A* conferences since 2018.