

Rajdeep Mukherjee

PH.D. RESEARCH SCHOLAR (INSTITUTE), CNERG, DEPT. OF CSE, IIT KHARAGPUR

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Summary

I am a final-year Ph.D. Candidate at the Dept. of CSE, IIT Kharagpur advised by [Prof. Pawan Goyal](#) and [Prof. Niloy Ganguly](#). My primary area of research is Natural Language Processing (NLP), with research interests including Large Language Models (LLMs), Prompt Engineering, Parameter-Efficient Fine-tuning, Information Extraction, and Text Summarization. My Ph.D. thesis focuses on addressing the modeling and evaluation requirements of text summarization solutions across multiple domains such as e-commerce, finance, disaster mitigation, law, and tourism. At present, I am exploring the utility of LLMs in solving extreme multi-label classification tasks, such as labeling numerals in financial disclosures and extracting attribute-value pairs for e-commerce products. In the future, I want to work in the area of AI for Health and Social Good.

Education

Indian Institute of Technology (IIT), Kharagpur

PHD IN COMPUTER SCIENCE AND ENGINEERING

Kharagpur, India

Jan 2018 - Present

- Thesis Topic - Domain-Specific Text Summarization: Modeling and Evaluation
- Advisors: Prof. Pawan Goyal, Prof. Niloy Ganguly, Prof. Sourangshu Bhattacharya

Indraprastha Institute of Information Technology (IIIT) Delhi

M.TECH IN COMPUTER SCIENCE AND ENGINEERING

Delhi, India

Jul 2015 - Jul 2017

- CGPA: 9.11, Ranked 1st in Information Security Specialization (with thesis)
- Supervisor: [Prof. Sambuddho Chakravarty](#) | [M.Tech Thesis](#)

Jadavpur University, Kolkata

B.E. IN INFORMATION TECHNOLOGY

Kolkata, India

Jul 2007 - Jun 2011

- CGPA: 8.59, University Gold Medalist, TCS Best Student Project awardee.
- Supervisor: [Prof. Samiran Chattopadhyay](#) | [Bachelors Thesis](#)

Kendriya Vidyalaya (ONGC) Chandkheda, Ahmedabad, Gujarat

ALL INDIA SENIOR SCHOOL CERTIFICATE EXAMINATION (AISSCE)

Ahmedabad, India

2007

- Percentage: 91.8 %

Kendriya Vidyalaya (ONGC) Chandkheda, Ahmedabad, Gujarat

ALL INDIA SECONDARY SCHOOL EXAMINATION (AISSE)

Ahmedabad, India

2005

- Percentage: 94.2 %
- Adjudged School Topper; 2nd place, KVS Ahmedabad Region (with 47+ schools)

Work Experience

Amazon Science

APPLIED SCIENTIST II INTERN

Bangalore, India

Apr - Oct 2023

- Worked with [Sachin Farfade](#) towards improving customer search experience on e-commerce websites using Large Language Models.
- Submitted papers at Amazon Machine Learning Conference (AMLC) 2023, and WSDM 2024, with a couple of works ongoing.

IBM Research Labs

RESEARCH INTERN

Delhi, India

May - Jul 2018

- Worked with [Dipyaman Banerjee](#) and [Kuntal Dey](#) towards designing a CNN-based solution for identifying and recognizing bird sounds.
- Participated in the **Bird Audio Detection** task as a part of [IEEE AASP DCASE2018 Challenge](#).
- Our team secured **7th rank worldwide** (1st in India) among all the participants. [Challenge Results](#)
- Our work was accepted as a **Poster** at DCASE2018 Workshop, held in Surrey, UK (November 2018).

Indian Institute of Technology Kharagpur

SENIOR PROJECT OFFICER

Kharagpur, India

Aug - Dec 2017

- Worked on Online Social Network Analysis as part of CNeRG.
- Explored areas like Opinion Dynamics, Rumor Detection, and Click-bait Detection.

PricewaterhouseCoopers (PwC) India

TECHNOLOGY CONSULTANT

Kolkata, India

Aug 2011 - Jul 2015

- Worked as a Business Intelligence (BI) developer and Data Modeler in the Advisory Line of Service (LOS).
- Led projects in data warehousing, data modeling and BI using Microsoft technologies like MSBI suite, Visual Studio, MS SQL Server 2012 etc.
- Held several positions of responsibility and was instrumental in managing client expectations and relationships.

Selected Publications

CONTRASTE: Supervised Contrastive Pre-training With Aspect-based Prompts For Aspect Sentiment Triplet Extraction

Rajdeep Mukherjee, Nithish Kannen, Saurabh Kumar Pandey, Pawan Goyal

[Paper](#) | [Code](#)

EMNLP 2023

MILDSum: A Novel Benchmark Dataset for Multilingual Summarization of Indian Legal Case Judgments

Debtanu Datta, Shubham Soni, **Rajdeep Mukherjee**, Saptarshi Ghosh

[Paper](#) | [Dataset & Code](#)

EMNLP 2023

ECTSum: A New Benchmark Dataset For Bullet Point Summarization of Long Earnings Call Transcripts

Rajdeep Mukherjee, Abhinav Bohra, Akash Banerjee, Soumya Sharma, Manjunath Hegde, Afreen Shaikh, Shivani Shrivastava, Koustuv Dasgupta, Niloy Ganguly, Saptarshi Ghosh, Pawan Goyal

[Paper](#) | [Dataset & Code](#) | [Poster](#) | [Slides](#) | [Video](#) | [Citation](#)

EMNLP 2022

MTLTS: A Multi-Task Framework To Obtain Trustworthy Summaries From Crisis-Related Microblogs

Rajdeep Mukherjee, Uppada Vishnu*, Hari Chandana Peruri*, Sourangshu Bhattacharya, Koustav Rudra, Pawan Goyal, Niloy Ganguly

[Paper](#) | [Code](#) | [Poster](#) | [Slides](#) | [Video](#) | [Citation](#)

WSDM 2022

PASTE: A Tagging-Free Decoding Framework Using Pointer Networks for Aspect Sentiment Triplet Extraction

Rajdeep Mukherjee, Tapas Nayak, Yash Butala, Sourangshu Bhattacharya, Pawan Goyal

[Paper](#) | [Code](#) | [Poster](#) | [Slides](#) | [Video](#) | [Citation](#)

EMNLP 2021

Understanding the Role of Affect Dimensions in Detecting Emotions from Tweets: A Multi-task Approach

Rajdeep Mukherjee, Atharva Naik*, Sriyash Poddar*, Soham Dasgupta, Niloy Ganguly

[Paper](#) | [Code](#) | [Blog](#) | [Poster](#) | [Slides](#) | [Video](#) | [Citation](#)

SIGIR 2021

Reproducibility, Replicability and Beyond: Assessing Production Readiness of Aspect Based Sentiment Analysis in the Wild

Rajdeep Mukherjee*, Shreyas Shetty*, Subrata Chattopadhyay, Subhadeep Maji, Samik Datta, Pawan Goyal

[Paper](#) | [Code](#) | [Slides](#) | [Video](#) | [Citation](#)

ECIR 2021

Read what you need: Controllable Aspect-based Opinion Summarization of Tourist Reviews

Rajdeep Mukherjee, Hari Chandana Peruri, Uppada Vishnu, Pawan Goyal, Sourangshu Bhattacharya, Niloy Ganguly

[Paper](#) | [Code](#) | [Slides](#) | [Video](#) | [Citation](#)

SIGIR 2020

Professional Activities

Program Committee Member

AAAI[’24,’23], WSDM’24, EMNLP[’23,’22], ACL’23, EACL’23, SIGIR’22

Reviewer/Sub-Reviewer for Conference

AAAI[’24,’23], WSDM’24, EMNLP[’23,’22,’20,’19], ACL[’23,’22], EACL’23, SIGIR[’22,’21,’20], NAACL’22, NEURIPS’21, SDM’21, CODS-COMAD[’21,’19], LREC’20

Reviewer/Sub-Reviewer for Journal

TWEB[’22,’20], COMPUTER SPEECH AND LANGUAGE’22, IJDRR’21, TCSS’20

Teaching Assistance

Spring '22	CS60075: Natural Language Processing , Instructor: Prof. Pawan Goyal	IIT Kharagpur
Autumn '21	CS60092: Information Retrieval , Instructor: Prof. Saptarshi Ghosh	IIT Kharagpur
Autumn '21	noc21-cs102: Natural Language Processing , Instructor: Prof. Pawan Goyal	NPTEL
Spring '21	CS60075: Natural Language Processing , Instructor: Prof. Pawan Goyal	IIT Kharagpur
Autumn '20	CS60083: Parameterized Algorithms , Instructors: Prof. Palash Dey, Prof. Sudeshna Kolay	IIT Kharagpur
Spring '20	CS60092: Information Retrieval , Instructors: Prof. Pawan Goyal, Prof. Saptarshi Ghosh	IIT Kharagpur
Autumn '19	CS29003: Algorithms-1 Lab , Instructors: Prof. Pawan Goyal, Prof. Animesh Mukherjee	IIT Kharagpur
Autumn '19	noc19-cs56: Natural Language Processing , Instructor: Prof. Pawan Goyal	NPTEL
Spring '19	Programming and Data Structures Lab , Instructor: Prof. Rogers Mathew	IIT Kharagpur
Autumn '18	Programming and Data Structures Lab , Instructors: Prof. Rogers Mathew, Prof. Sudebkumar Prasant Pal	IIT Kharagpur
Spring '17	CSE352/CSE552: Security Engineering , Instructor: Prof. Sambuddho Chakravarty	IIIT Delhi

Scholarships & Travel Grants

2022	Microsoft Research Travel Grant , awarded for attending WSDM 2022.	Microsoft Research
2022	ACM-India and IARCS Travel Grant , awarded for attending WSDM 2022.	ACM-India IARCS
2022	SIGIR Student Travel Grant , awarded for registering the paper.	WSDM 2022
2021	SIGIR Student Travel Grant , awarded for registering the paper and attending the conference (virtually).	SIGIR 2021
2020	SIGIR Student Travel Grant , awarded for registering the paper and attending the conference (virtually).	SIGIR 2020

Honors & Awards

2013	PwC Experience Award , awarded twice for demonstrating PwC Core values and behaviors.	Kolkata, India
2012	PwC Above and Beyond Award , awarded by Sudipto Ghosh, Partner, PwC.	Kolkata, India
2011	TCS Best Student Project Award and University Gold Medal , jointly awarded by Tata Consultancy Services and Jadavpur University.	Kolkata, India
2010	2nd place, IBM Technical Quiz , INSTRUO 2010 held at IEST, Shibpur in the Technology Area on Green IT.	Kolkata, India
2005	2nd place, AISSE, KVS Ahmedabad Region , selected for CSIR Program on Youth for Leadership in Science.	Ahmedabad, India

Extracurricular Activities

2021	Judge , Open IIT: Eastern Vocal Competition	Kharagpur, India
2018	Permanent Membership , Eastern Technology Music Society (ETMS), IIT Kharagpur.	Kharagpur, India
2015	Permanent Membership , AudioBytes, Music Club, IIIT Delhi.	Delhi, India
2013	Silvers Plate Runners Up , Merchants' Cup Badminton Tournament.	Kolkata, India
2011	Multiple awards , National / State level Singing Competitions.	Kolkata, India
2010	Member, Organizing Committee , SRIJAN 2010, Annual Technical Fest, Jadavpur University.	Kolkata, India

References

Dr. Niloy Ganguly

Professor, Department of Computer Science and Engineering, IIT Kharagpur

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Dr. Pawan Goyal

Associate Professor, Department of Computer Science and Engineering, IIT Kharagpur

PAWANG@CSE.IITKGP.AC.IN

Dr. Sourangshu Bhattacharya

Associate Professor, Department of Computer Science and Engineering, IIT Kharagpur

SOURANGSHU@CSE.IITKGP.AC.IN