

Dr. Sandip Sarkar

Assistant Professor
Computer Science and Application
Hijli College
Post: Hijli Co-operative Kharagpur
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BRIEF INTRODUCTION

I am currently working as an Assistant Professor in the Department of Computer Science & Applications at Hijli College, Kharagpur. I completed my Ph.D. in Computer Science & Engineering from Jadavpur University in 2025, my M.E. in Computer Science & Engineering from Jadavpur University in 2014, and my B.Tech. in Computer Science & Engineering from Jalpaiguri Government. Engineering College in 2011. I had qualified for GATE (2012), West Bengal SET (2014), and UGC-NET (2014), and received a GATE fellowship during my postgraduate studies (M.E).

I have published and presented more than 20 international research papers in reputable venues, including SemEval, CICBA, COMSYS, ETAEERE, ICONDEEPCOM, and EVALITA, as well as journal publications in Computación y Sistemas, the International Journal of Asian Language Processing, and IJCA.

Research Interest

Natural Language Processing, Deep Learning, Question Answering, Information Retrieval, Sentiment Analysis, Network Security.

Google Scholar

Citations — 100 & **h-index** — 4 & **i10-index** — 3
https://scholar.google.com/citations?user=tuUfV_UAAAAAJ&hl=en

ACHIVEMENTS

Qualified GATE Exam	2012
Qualified West Bengal SET Exam	December-2014
Qualified UGC NET for Assistant Professor	December-2014

FELLOWSHIP

GATE Fellowship During Post-Graduation (M.E.)	2012-2014
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EDUCATION

<i>Ph.D. in Computer Science & Engineering</i> Jadavpur University, Kolkata	2025
<i>M.E. (Master of Computer Science & Engineering)</i> Jadavpur University, Kolkata <i>Thesis: A Survey on Threats and Vulnerabilities of Web Services</i>	2012–2014
<i>B.Tech in Computer Science & Engineering</i> Jalpaiguri Govt. Engineering College	2007–2011
<i>Higher Secondary Examination (XII)</i> Raiganj Coronation High School, W.B.C.H.S.E	2007
<i>Secondary Examination (X)</i> Raiganj Coronation High School, W.B.B.S.E	2005

ORIENTATION & REFRESHER COURSES

Online Induction Training for Faculty

10 November - 09 December 2020

*Organized by Ramanujan College
in collaboration with Central university of Tamil Nadu
VCSG Uttarakhand University of Horticulture and Forestry.
Dhote Bandhu Science College, Gondia*

Refresher Course

15 September - 28 September 2021

*Organized by UGC-Human Resource Development Centre,
Ranchi University*

Faculty Induction Programme

4th January - 31 January 2021

*Organized by UGC-Human Resource Development Centre,
Ranchi University*

INDUSTRIAL TRAINING

Globsyn

October-2010

Database Management System

IBM

July-2011

Core Java

SUBJECT TAUGHT

Design & Analysis of Algorithm

Computer Networks

Text Analytics

Database Management System

Python Programming

Java Programming

INTERNATIONAL CONFERENCE/SEMINAR/WORKSHOP (SELECTIVE)

FIRE

7 - 10 December, 2016

8th meeting of Forum for Information Retrieval Evaluation,
Indian Statistical Institute (ISI), Kolkata

ICON

18th - 21st December, 2017

14th International Conference on Natural Language Processing,
Jadavpur University, Kolkata, India

COMSYS-2020

13th to 15th January 2020

International Conference on Frontiers in Computing and Systems
Organised by Department of CSE and ECE,
Jalpaiguri Government Engineering College,
Jalpaiguri, West Bengal, India

ETAERE-2020

5th to 6th March 2020

2nd International Conference on Emerging Trends and
Advances in Electrical Engineering and Renewable Energy
KIIT Deemed to be University, Bhubaneswar, Odisha

CICBA - 2022

January 7-8, 2022

Fourth International Conference on
Computational Intelligence in Communications and Business Analytics
Department of Computer Science & Engineering, Assam University, Silchar

CLEF 2022

5 - 8 September 2022

Conference and Labs of the Evaluation Forum
Information Access Evaluation meets Multilinguality,
Multimodality, and Visualization
hosted by Università di Bologna, Italy

Evalita 2023

7th and 8th of September, 2023

8th Evaluation Campaign of Natural Language
Processing and Speech Tools for Italian
Parma, Italy

NAACL 2024

16-21 June, 2024

NumEval: Numeral-Aware Language Understanding and Generation
SemEval-2024 Task 7, Mexico City, Mexico.

ACL 2024

11-16 August, 2024

TextGraph-17 workshop co-located with the 62nd Annual Meeting
of the Association for Computational Linguistics (ACL-2024) in
Bangkok, Thailand.

ICONDEEPCOM-2024

24-25 April, 2024

3rd International Conference on
Deep Sciences for Computing and Communications
Organized by SRM Institute of Science and Technology,
Chennai, India

CONFERENCE PUBLICATIONS

1. **Sandip Sarkar**, Dipankar Das, Partha Pakray, Alexander Gelbukh, "JUNITMZ at SemEval-2016 Task 1: Identifying Semantic Similarity Using Levenshtein Ratio", at *Proceedings of SemEval-2016*, pages 702–705, San Diego, California, June 16-17, 2016. Association for Computational Linguistics. **[ACL Anthology]** (Cited by: 19)
<http://www.aclweb.org/anthology/S16-1108>
2. **Sandip Sarkar**, Saurav Saha, Jereemi Bentham, Partha Pakray, Dipankar Das, Alexander Gelbukh. NLP-NITMZ@DPIL-FIRE2016: Language Independent Paraphrases Detection. Working notes of FIRE 2016 - Forum for Information Retrieval Evaluation. Kolkata, India, December 7–10, 2016. CEUR Workshop Proceedings, ISSN 1613-0073, Vol. 1737, CEUR-WS.org, 2016, pp. 256–259. **[CEUR Workshop Proceedings]** (Cited by: 15)
<http://ceur-ws.org/Vol-1737/T6-5.pdf>
3. **Sarkar S.**, Pakray P., Das D., Gelbukh A. (2017) Regression Based Approaches for Detecting and Measuring Textual Similarity. In: Mining Intelligence and Knowledge Exploration. Lecture Notes in Computer Science, vol 10089, pages 144–152. (Cited by: 4) **[Springer Conference]**,
https://link.springer.com/chapter/10.1007/978-3-319-58130-9_14
4. **Sandip Sarkar**, Dipankar Das, and Partha Pakray. 2017. JU_NITM: A classification approach for answer selection in multi-choice question answering system. In *Proceedings of the 8th International Joint Conference on Natural Language Processing, Shared Tasks*, pages 213–216, Taipei, Taiwan, November 27– December 1, 2017. **[ACL Anthology]** (Cited by: 4)
<https://www.aclweb.org/anthology/I17-4036>
5. **Sandip Sarkar**, "Detecting Vulnerabilities of Web Application using Penetration Testing", International Conference on Frontiers in Computing and Systems (COMSYS-2020) 13th to 15th January 2020, Organised by Department of Computer Science and Engineering and Electronics and Communication Engineering Jalpaiguri Government Engineering College Jalpaiguri, West Bengal, India **[Springer Conference]** **[Poster Presentation]**

6. **Sarkar S.**, Das D., Pakray P., Pinto D. (2021) "A Hybrid Sequential Model for Text Simplification." In: Priyadarshi N., Padmanaban S., Ghadai R.K., Panda A.R., Patel R. (eds) *Advances in Power Systems and Energy Management. ETAEERE 2020. Lecture Notes in Electrical Engineering*, vol 690. Springer, Singapore. https://doi.org/10.1007/978-981-15-7504-4_4
[Springer Conference] (Cited by: 2)
https://link.springer.com/chapter/10.1007/978-981-15-7504-4_4
7. **Sarkar S.** (2021) "Detecting Vulnerabilities of Web Application Using Penetration Testing and Prevent Using Threat Modeling." In: Mallick P.K., Bhoi A.K., Chae GS., Kalita K. (eds) *Advances in Electronics, Communication and Computing. Lecture Notes in Electrical Engineering*, vol 709. Springer, Singapore.
[Springer Conference]
https://link.springer.com/chapter/10.1007/978-981-15-8752-8_3
8. **Sarkar S.**, Das D., Pakray P., Pinto D. (2022) "Generating Equations from Math Word Problem Using Deep Learning Approach". In: Mukhopadhyay, S., Sarkar, S., Dutta, P., Mandal, J.K., Roy, S. (eds) *Computational Intelligence in Communications and Business Analytics. CICBA 2022. Communications in Computer and Information Science*, vol 1579. Springer, Cham.
[Springer Conference]
https://link.springer.com/chapter/10.1007/978-3-031-10766-5_19
9. **Sarkar S.**, Das D., Pakray P., Pinto D. (2022) "Formula Retrieval Using Structural Similarity". *CLEF 2022: Conference and Labs of the Evaluation Forum*, September 5–8, 2022, Bologna, Italy, Vol-3180, pp. 138–146. [CEUR Workshop Proceedings]
<http://ceur-ws.org/Vol-3180/paper-08.pdf>
10. **Sarkar S.**, Das D., Pakray P., Pinto D. (2023) "HIJLI-JU-CLEF at MULTI-Fake-DetectiVE: Multi-modal Fake News Detection Using Deep Learning Approach". *MULTI-Fake-DetectiVE – MULTImodal Fake News Detection and VERification in EVALITA 2023*, Parma (September 7th-8th 2023). [CEUR Workshop Proceedings]
<https://ceur-ws.org/Vol-3473/paper33.pdf>
11. **Sarkar S.**, Das D., Pakray P., Pinto D. (2024) "Answering Beyond Borders: A Comparative Analysis of Various BERT Models in Cross-Lingual QA Using XQuAD". *3rd International Conference on Deep Sciences for Computing and Communications*. [Accepted]
<https://www.srmist.edu.in/events/icondeepcom-2024/>
12. Sengupta P., **Sarkar S.**, Das D. (2024) "HIJLI-JU at SemEval-2024 Task 7: Enhancing Quantitative Question Answering Using Fine-tuned BERT Models". *NumEval: Numeral-Aware Language Understanding and Generation SemEval-2024 Task 7*, co-located with NAACL 2024 in Mexico City, Mexico. [ACL Anthology]
<https://aclanthology.org/2024.semeval-1.43.pdf>
13. **Sarkar S.** and Das D. (2024) "A Multi-head Approach to Improve Performance and Scalability in Knowledge Graph Question Answering Systems", *6th International Conference on Computer & Communication Technologies (IC3T 2024)*. [Accepted]
<https://link.springer.com/book/9789819674763>
14. Singha Roy M., **Sarkar S.** (2024) "Text Summarization Using Deep Learning Approach". [Submitted]

JOURNAL PUBLICATIONS

1. Amarnath Pathak, Partha Pakray, **Sandip Sarkar**, Dipankar Das and Alexander Gelbukh, "MathIRs: Scientific Documents Retrieval System", *Computacion y Sistemas. Thematic issue: Authorship Analysis* (Guest editors: M. Montes, L. Villaseñor), Vol 21, No 2, pp. 253–265, 2017, ISSN: 2007-9737. (Cited by: 19)
[[ESCI , Scopus indexed & UGC Care List, JCR Impact Factor: 0.6]]

<http://www.scielo.org.mx/pdf/cys/v21n2/1405-5546-cys-21-02-00253.pdf>

2. **Sandip Sarkar**, Dipankar Das, Partha Pakray and David Pinto, "Developing MCQA Framework for Basic Science Subjects using Distributed Similarity Model and Classification based Approaches", *International Journal of Asian Language Processing*. Vol. 30, No. 03, 2050015 (2020) [**World Scientific Publisher**] (Cited by: 2)
<https://doi.org/10.1142/S2717554520500150>
3. **Sandip Sarkar**, Dipankar Das, Partha Pakray and David Pinto "Math Word Problem Solving: Operator and Template Techniques with Multi-Head Attention". *Computacion y Sistemas*. Thematic issue: Authorship Analysis (Guest editors: Grigori Sidorov, Ulises Cortés), Vol. 27, No. 4, 2023, pp. 1075–1088, ISSN: 2007-9737
[[**ESCI , Scopus indexed & UGC Care List, JCR Impact Factor: 0.6**]]
<https://www.cys.cic.ipn.mx/ojs/index.php/CyS/article/view/4769/3624>
4. **Sarkar S.**, Das D., Pakray P., Pinto D. (2024) "Enhancing Math Word Problem Solving with Multi-Head Attention Mechanism". *International Journal of Computers and Their Applications*, ISSN: 1076-5204. pp 35-48. Vol. 31, No. 1, March 2024, Guest Editor: Ajay Bandi.
[[**Scopus indexed & UGC Care List**]]
<https://isca-hq.org/Documents/Journal/Archive/310104.pdf>
5. **Sarkar S.**, Das D., Pakray P., Pinto D. (2025) "Text Simplification Based Question Answering using Deep Learning Approach". [[**Submitted**]]

SPECIAL TALK AND RESOURCE PERSON

1. "Certificate Course in Machine Learning", 01/05/2024 to 31/05/2024 in Gope College
2. Special Lecture on "Question Answering System", on 27/02/2024 in Kharagpur College

PROFESSIONAL ENGAGEMENTS AND ACADEMIC LEADERSHIP (SELECTIVE)

1. **Head of the Department** Computer Science and Application of Hijli College From February, 2020 to June, 2023.
2. **Program Committee member** of "29th International Conference on Neural Information Processing (ICONIP 2022)" organized by the Asia Pacific Neural Network Society (APNNS) November 22-26, 2022, New Delhi, India
3. **Program Committee member** for "International Conference on Natural Language Processing (ICON)" in the year 2020 & 2023.
4. **Convener of One Day National Webinar** on "Machine Learning and its Trending Application" in Hijli College on 8th October, 2020.
5. **Coordinator** in 10 days workshop "Basic Computer Skills" organized by Computer Science and Application Department, Hijli College, from 10th February to 20th February, 2022.
6. **Nodal with Jt. Convener(2023, 2024), Jt. Convener(2021, 2022), and Member (2017-2019) of Admission Committee** of Hijli College.
7. **Convener of IT Committee** of Hijli College from 2024 - till date. and Member of IT Committee of Hijli College from 2017 - 2023.
8. **Team Leader** of Criterion IV of NAAC of Hijli College in 2024.
9. Working as **Head Examiner under the Bhatnagar College, Nodal Centre of Vidyasagar University** for UG 5th Semester Examination (CBCS) - 2022 and **Head Examiner under the Midnapore City College, Nodal Centre of Vidyasagar University** for UG 3rd Semester Examination (CBCS) - 2022

10. **Member of Organizing committee** of one day **International Seminar** on "Higher Education in 21st Century Issues and Challenges" in Hijli College
11. **Technical Committee Member** of "National Education Policy 2020" in Hijli College on 2nd and 3rd July 2021
12. **Observer** in the "Teacher Eligibility Test (TET) - 2022" Date: 11/12/2022.

PAPER REVIEWER AND SUB-REVIEWER

1. **FLAIRS-30** May 22-24, 2017
The 30th International FLAIRS Conference
The Hilton Marco Island Beach Resort and Spa Marco Island, Florida, USA
2. **MIKE 2016** November 13-19, 2016
Mining Intelligence and Knowledge Exploration.
Center for Computing Research of the National Polytechnic Institute IPN, Mexico
3. **CSI 2017** January 19-21, 2018
International Conference on Social Transformation - Digital Way
Proceedings of the 52nd Annual Convention of Computer Society of India (CSI 2017)
4. **ICON 2020** December 18-21, 2020
17th International Conference on Natural Language Processing
Organized by NLP Association, India AI-NLP-ML Group, IIT Patna
5. **ICDSA 2021** April 10-11, 2021
2nd International Conference on Data Science and Applications
Organized by Jadavpur University, Kolkata
Certificate - https://drive.google.com/file/d/1vWEDefaAH1B_7Xvp6ksWK1DoHZEgtPwn/view
6. **FIRE 2021** 13th-17th December, 2021
13th meeting of Forum for Information Retrieval Evaluation
Organized by ISI Kolkata, India
7. **ICON 2021** December 16-19, 2021
18th International Conference on Natural Language Processing
Organized by NIT Silchar
8. **ICDSA 2022** March 26-27, 2022
3rd International Conference on Data Science and Applications
Organized by Jadavpur University, Kolkata
9. **Innovations in Systems and Software Engineering (ISSE)** July 2022
Springer Journal, Scopus Index
10. **ICDEC-2022** 7th - 9th September 7-9, 2022
International Conference on Data, Electronics and Computing
Departments of Electronics & Communication Engineering, and
Department of Computer Applications, North-Eastern Hill University
(A Central University) Shillong, Meghalaya, India
in collaboration with COMSYS Educational Trust, Kolkata, India
11. **ICONIP 2022** November 22-26, 2022
29th International Conference on
Neural Information Processing organized by
Indian Institute of Technology Indore and
Indian Institute of Information Technology Allahabad
12. **ICON 2023** October 13-15, 2023
20th International Conference on Natural Language Processing
Organized by Goa University

13. **ICON 2024** 19th to 22nd December, 2024
21th International Conference on Natural Language Processing
Organized by AU-KBC Research Centre, Chennai, India
14. **SemEval-2024** June 16–21, 2024
The 18th International Workshop on Semantic Evaluation
Organized by SemEval, co-located with NAACL 2024 in Mexico City, Mexico.
15. **ICONDEEPCOM-2024** 24-25 April, 2024
3rd International Conference on Deep Sciences for Computing and Communications
Organized by SRM Institute of Science and Technology, Chennai, India

PROFILE

1. <https://www.scopus.com/authid/detail.uri?authorId=57192392396>
2. https://scholar.google.com/citations?user=tuUfV_UAAAAJ&hl=en.
3. <https://orcid.org/0000-0002-0955-5091>

REFERENCES

Dr. Dipankar Das

Assistant Professor
Computer Science and Engineering
Jadavpur University, Kolkata
<http://www.dasdipankar.com/>

Dr. Partha Pakray

Associate Professor
Computer Science and Engineering
NIT Silchar
<http://cs.nits.ac.in/partha/>

Dr. David Pinto

Faculty of Computer Science
Benemérita Universidad Autónoma de Puebla
Mexico
<https://index.php/david-eduardo-pinto-avendano/>

Dr. Mridul Sankar Barik

Assistant Professor
Computer Science and Engineering
Jadavpur University
<https://jaduniv.irins.org/profile/124357/>

DECLARATION

I hereby declare that the above-mentioned information is correct up to my knowledge and I bear the responsibility for the above-mentioned particulars.

Date:

Place:

Signature