

Pradeep Kumar Roy

## Dr. Pradeep Kumar Roy

Assistant Professor (Grade-II, Level-10)

Department of Computer Science and Engineering

Indian Institute of Information Technology (IIIT), Surat

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**Research Publications:** IEEE Transactions on AI, ACL, Springer, Elsevier, and other SCI Indexed Journals.



### Academic Background:

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| Ph.D.:                     | Computer Science and Engineering   |
| Institute:                 | National Institute of Technology, Patna  |
| M. Tech (Secure Top Rank): | Computer Science and Engineering Department  |
| Institute:                 | National Institute of Technology, Patna  |
| B. Tech:                   | Computer Science and Engineering   |
| University:                | BPUT, Odisha   |
| Research Interest:         | Machine Learning, Deep Learning, Social Network, Pattern Recognition, Data Science |

### Awards and Honors

- Featured in the Top 2% of Scientists in the World list prepared by Stanford University, USA, 2022
- Recipient of MHRD fellowship for Ph.D. in Computer Science and Engineering at NIT Patna, Bihar, India.
- Recipient of MHRD fellowship for M. Tech in Information Technology at NIT Patna, Bihar, India.
- Recipient of Certificate of Excellence for Securing Top Rank in M. Tech (IT) in NIT Patna (2013-2015), Bihar, India.
- Served as a Session chair at IEEE Global Conference for Advancement in Technology, Bangalore, India (GCAT-2021) held on October 01-03, 2021 at Nagarjuna College of Engineering and Technology, Bangalore, India.
- Served as a Session chair at 2nd International Conference on Advances in Distributed Computing and Machine Learning (ICADCML-2021) held on January 15-16, 2021 at Siksha 'O' Anusandhan (SOA) University, Bhubaneswar, Odisha, India.

### Teaching

#### Undergraduate Courses:

- Artificial Intelligence: AY 2022-2023
- Natural Language Processing, AY 2021-22, AY 2022-2023
- Fuzzy Logic and Neural Network, AY 2021-22, AY 2022-2023
- Introduction to Machine Learning: AY 2021-2022

- Computer Networks, AY 2021-2022
- Fundamentals of Computer Programming: AY 2020-21
- Database Management Systems: AY 2020-21
- Soft Computing: AY 2019-20
- Programming of Problem Solving: AY 2018-19, 2019-20
- Theory of Computation: AY 2018-19
- C Programming and Data Structure: AY 2018-19

**PG Courses:**

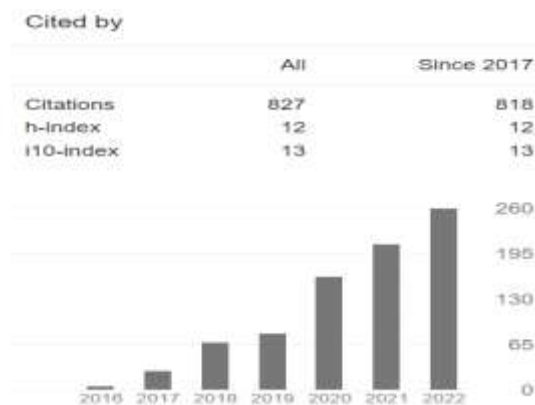
- Data Structure and Algorithms: AY 2019-20

**Workshop/Seminar/Conference Organized:**

1. Offered Summer Internship on “Data Science” at IIIT Surat between 19-06-2022 and 20-07-2022.
2. Offered Summer Internship on “Data Science” at IIIT Surat between 01-06-2021 and 30-07-2021.
3. Organizing member of First International Conference of Distributed Computing and Machine Learning (ICDCML-2020), held at VIT University, Vellore during 30-31<sup>st</sup>, January 2020.
4. TPC member of 2<sup>nd</sup> International Conference of Distributed Computing and Machine Learning (ICDCML-2021), held at SOA University, Bhubaneswar, Odisha, during 15-16th, January 2021.
5. Served as a TPC member of *Forum for Information Retrieval Evaluation (FIRE)*-2021 workshop.

**Journal Publications: 26 (First Authored: 19, Co-Authored: 7)**

- **Cumulative Impact Factor: 110.411**
- **Citation Indexed:**



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| 1. Dwivedy, V., Shukla, H. D., & <b>Pradeep Kumar Roy</b> (2022). <a href="#">LMNet: Lightweight multi-scale convolutional neural network architecture for COVID-19 detection in IoMT environment</a> . <i>Computers and Electrical Engineering</i> , 103, 108325. ISSN: 0045-7906 [Elsevier, SCIE, IF: 3.818] |
| 2. <b>Pradeep Kumar Roy</b> , Singh, J. P., & Banerjee, S. (2022). <a href="#">Is this question going to be closed? Answering question closibility on Stack Exchange</a> . <i>Journal of Information Science</i> , 01655515221118665. [SAGE, SSCI, IF:2.462]   |
| 3. <b>Pradeep Kumar Roy</b> , Bhawal, S., & Subalalitha, C. N. (2022). <a href="#">Hate speech and offensive language detection in Dravidian languages using deep ensemble framework</a> . <i>Computer Speech &amp; Language</i> , 75, 101386. ISSN: 0885-2308 [Elsevier, SCIE, IF: 3.252]                     |
| 4. <b>Pradeep Kumar Roy</b> , Tripathy, A. K., Weng, T. H., & Li, K. C. (2023). <a href="#">Securing</a>   |

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| <p><a href="#">social platform from misinformation using deep learning</a>. <i>Computer Standards &amp; Interfaces</i>, 84, 103674. . ISSN: 920548 [<b>Elsevier, SCIE, IF: 3.721</b>]</p>  |
| <p>5. Jain, S., &amp; <b>Pradeep Kumar Roy</b> (2022). <a href="#">E-commerce review sentiment score prediction considering misspelled words: a deep learning approach</a>. <i>Electronic Commerce Research</i>, 1-25. ISSN: 1572-9362, [<b>Springer, SCIE, IF:3.462</b>]</p>  |
| <p>6. <b>Pradeep Kumar Roy</b>, Singh, A., Desai, J. V., &amp; Singh, S. K. (2022). <a href="#">Healthcare Data Security Using Lightweight Protocol for Cyber Physical System</a>. <i>IEEE Transactions on Network Science and Engineering</i>. ISSN: 2327-4697, [<b>IEEE, SCIE, IF:5.033</b>]</p>   |
| <p>7. <b>Pradeep Kumar Roy</b>, &amp; Mali, F. U. (2022). <a href="#">Cyberbullying detection using deep transfer learning</a>. <i>Complex &amp; Intelligent Systems</i>, 1-19. ISSN: 2198-6053, [<b>Springer, SCIE, IF:6.700</b>]</p>   |
| <p>8. <b>Pradeep Kumar Roy</b>, &amp; Singh, S. K. (2022). <a href="#">Privacy preserving monitoring protocol for Cyber-Physical System</a>. <i>Computers and Electrical Engineering</i>, 102, 108232. ISSN: 0045-7906 [<b>Elsevier, SCIE, IF: 3.818</b>]</p>  |
| <p>9. <b>Pradeep Kumar Roy</b>, and Kumar, A. (2022). <a href="#">Early prediction of COVID-19 using ensemble of transfer learning</a>. <i>Computers and Electrical Engineering</i>, 101, 108018. ISSN: 0045-7906 [<b>Elsevier, SCIE, IF: 3.818</b>]</p>   |
| <p>10. <b>Pradeep Kumar Roy</b>, Saumya, S., Singh, J. P., Banerjee, S., &amp; Gutub, A. (2022). <a href="#">Analysis of community question-answering issues via machine learning and deep learning: State-of-the-art review</a>. <i>CAAI Transactions on Intelligence Technology</i>. ISSN:2468-2322 [<b>Wiley, SCIE, IF:7.911</b> ]</p>  |
| <p>11. <b>Pradeep Kumar Roy</b>, Zishan Ahmad, Jyoti Prakash Singh &amp; Snehasish Banerjee (2022) <a href="#">Feature Extraction to Filter Out Low-Quality Answers from Social Question Answering Sites</a>, <i>IETE Journal of Research</i>, DOI: <a href="#">10.1080/03772063.2022.2048715</a> [<b>Taylor &amp; Francis, SCIE, IF: 2.33</b>]</p>  |
| <p>12. <b>Pradeep Kumar Roy</b>, Tripathy, A. K., Singh, S. K., &amp; Li, K. C. (2022). <a href="#">Recent advancements in privacy-aware protocols of source location privacy in wireless sensor networks: A survey</a>. <i>Computer Science and Information Systems</i>, (00), 7-7. [<b>ComSIS Consortium, SCIE, IF: 1.167</b>]</p>   |
| <p>13. <b>Pradeep Kumar Roy</b>, Kumar, A., Singh, J. P., Dwivedi, Y. K., Rana, N. P., &amp; Raman, R. (2021). <a href="#">Disaster related social media content processing for sustainable cities</a>. <i>Sustainable Cities and Society</i>, 103363. [<b>Elsevier, SCIE, IF: 7.587</b>]</p>  |
| <p>14. Chahar, S. &amp; <b>Pradeep Kumar Roy</b> (2021). COVID-19: <a href="#">A Comprehensive Review of Learning Models</a>. <i>Archives of Computational Methods in Engineering</i>, 29, 1915-1940, ISSN: 1134-3060, Accepted, [<b>Springer, SCIE, IF: 7.302</b>] [<b>Listed in Global literature on coronavirus disease on the official website of the World Health Organization (WHO).</b> ]</p> |
| <p>15. <b>Pradeep Kumar Roy</b>, &amp; Chahar, S. (2021). <a href="#">Fake Profile Detection on Social Networking Websites: A Comprehensive Review</a>. <i>IEEE Transactions on Artificial Intelligence</i>. doi: 10.1109/TAI.2021.3064901.</p>  |

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| 16. T. K. Das, <b>Pradeep Kumar Roy</b> , M. Uddin, K. Srinivasan, C. Chang et al., " <a href="#">Early tumor diagnosis in brain mr images via deep convolutional neural network model.</a> " <i>Computers, Materials &amp; Continua</i> , vol. 68, no.2, pp. 2413–2429, 2021. [ <b>SCIE, IF: 3.772</b> ]   |
| 17. <b>Pradeep Kumar Roy</b> , ' <a href="#">Multilayer convolutional neural network to filter low quality content from Quora</a> ', <i>Neural Processing Letters</i> , 2020, 52, 805-821, ISSN: <b>1370-4621</b> , doi: <a href="https://doi.org/10.1007/s11063-020-10284-x">https://doi.org/10.1007/s11063-020-10284-x</a> [ <b>Springer, SCIE, IF: 2.891</b> ]   |
| 18. <b>Pradeep Kumar Roy</b> (2021). <a href="#">Deep Neural Network to Predict Answer Votes on Community Question Answering Sites</a> . <i>Neural Processing Letters</i> , 53(2), 1633-1646, ISSN: 1370-4621 [ <b>Springer, SCIE, IF: 2.891</b> ]  |
| 19. <b>Pradeep Kumar Roy</b> , A. K. Tripathy, T. K. Das and X. -z. Gao, "A <a href="#">Framework for Hate Speech Detection using Deep Convolutional Neural Network</a> ," in <i>IEEE Access</i> , doi: 10.1109/ACCESS.2020.3037073. [ <b>IEEE, SCIE, IF: 3.745</b> ]   |
| 20. <b>Pradeep Kumar Roy</b> , J. P. Singh, S. Banerjee, <a href="#">Deep learning to filter SMS Spam. Future Generation Computer Systems</a> , 2019, 102, 524-533. ISSN: 0167-739X, <a href="#">DOI: 10.1016/j.future.2019.09.001</a> . [ <b>Elsevier, SCIE, IF: 6.125</b> ]   |
| 21. <b>Pradeep Kumar Roy</b> , and J. P. Singh, (2019). <a href="#">Predicting closed questions in community question answering sites using Convolutional Neural Network</a> . <i>Neural Computing and Applications</i> , Vol. 32, pp. 10555-10572, ISSN NO: 0941-0643 [ <b>Springer, SCIE, IF: 4.774</b> ]   |
| 22. <b>Pradeep Kumar Roy</b> , J. P. Singh, Abdullah M. Baabdullah, Hatice Kizgin, and Nripendra P. Rana. (2018) " <a href="#">Identifying reputation collectors in community question answering (CQA) sites: Exploring the dark side of social media.</a> " <i>International Journal of Information Management</i> 42 (2018): 25-35. <a href="#">DOI: 10.1016/j.ijinfomgt.2018.05.003</a> , ISSN: 0268-4012 [ <b>Elsevier, SCI, IF: 18.958</b> ] |
| 23. Singh, J. P., Irani, S., Rana, N. P., Dwivedi, Y. K., Saumya, S., & <b>Pradeep Kumar Roy</b> (2017). <a href="#">Predicting the "helpfulness" of online consumer reviews</a> . <i>Journal of Business Research</i> , 70, 346-355, doi: 10.1016/j.jbusres.2016.08.008, ISSN: 0148-2963 [ <b>Elsevier, SCI, IF: 4.874</b> ]   |
| 24. <b>Pradeep Kumar Roy</b> , Z. Ahmad, J. P. Singh, Md. A. A. Alryalat, N. P. Rana, and Y. K. Dwivedi. " <a href="#">Finding and ranking high-quality answers in community question answering sites.</a> " <i>Global Journal of Flexible Systems Management</i> 19, no. 1 (2018): 53-68, ISSN: 0972-2696. DOI: 10.1007/s40171-017-0172-6, [ <b>Springer, Scopus, H-Index: 13</b> ]  |
| 25. Rimjhim, <b>Pradeep Kumar Roy</b> , and J. Prakash Singh (2021), <a href="#">Finding Location of Fake and Phantom Source for Source Location Privacy in Wireless Sensor Network</a> , <i>International Journal of Communication Networks and Distributed Systems</i> , DOI: 10.1504/IJCND.2021.10030838, Vol 26, no. 1. pp. 114-134. [ <b>Scopus, Inderscience</b> ]  |
| 26. <b>Pradeep Kumar Roy</b> , Ashish Singh, Asis K Tripathy, T. K. Das. <a href="#">Cyberbullying detection: an ensemble learning approach</a> , <i>International Journal of Computational Science and Engineering</i> , ISSN: 1742-7193, [ <b>Scopus, Inderscience</b> ]  |

1. **Pradeep Kumar Roy.**, Bhawal, S., Kumar, A., & Chakravarthi, B. R. (2022, May). [IIITSurat@ LT-EDI-ACL2022: Hope Speech Detection using Machine Learning](#). In Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion (pp. 120-126).
2. Kumar, A., Saumya, S., & **Pradeep Kumar Roy.** (2022, May). [SOA NLP@ LT-EDI-ACL2022: An Ensemble Model for Hope Speech Detection from YouTube Comments](#). In Proceedings of the Second Workshop on Language Technology for Equality, Diversity and Inclusion (pp. 223-228).
3. **Pradeep Kumar Roy**, Singh, A., Tripathy, A. K., & Das, T. K. (2022). [Identifying Cyberbullying Post on Social Networking Platform Using Machine Learning Technique](#). In *Advances in Distributed Computing and Machine Learning* (pp. 186-195). Springer, Singapore.
4. Singh, A., & **Pradeep Kumar Roy.** (2021). [Malicious URL Detection using Multilayer CNN](#). In *2021 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT)* (pp. 340-345). IEEE.
5. **Pradeep Kumar Roy**, and Kumar, Abhinav (2021), [Convolutional Neural Network for Text: A Stepwise Working Guidance](#) (September 27, 2021). Available at SSRN: <https://ssrn.com/abstract=3973041> or <http://dx.doi.org/10.2139/ssrn.3973041>
6. S. K. Singh and **Pradeep Kumar Roy**, (2020) "[Detecting Malicious DNS over HTTPS Traffic Using Machine Learning](#)," *2020 International Conference on Innovation and Intelligence for Informatics, Computing and Technologies (3ICT)*, Sakheer, Bahrain, 2020, pp. 1-6, doi: 10.1109/3ICT51146.2020.9312004.
7. **Pradeep Kumar Roy**, Sarabjeet Chowdhary, and Rocky Bhatia (2019). [A Machine Learning approach for automation of Resume Recommendation](#). *International Conference on International Conference on Information Management & Machine Intelligence (ICCIDS-2019)*. Gurugram, India, 06-07 September, 2019, *Procedia Computer Science*, 167, pp. 2318-2327. **(Scopus Indexed)**
8. Rimjhim, **Pradeep Kumar Roy**, and J. Prakash Singh, (2018) "[Encircling the Base Station for Source Location Privacy in Wireless Sensor Networks](#)" *2018 3rd International Conference on Computational Systems and Information Technology for Sustainable Solutions (CSITSS)*, Bengaluru, India, 2018, pp. 307-312. 20-22 December 2018, ISBN: 978-1-5386-6078-2 **(Web of Science Indexed)**
9. **Pradeep Kumar Roy**, and Jyoti Prakash Singh, (2018) "[A Tag2Vec Approach for Questions Tag Suggestion on Community Question Answering Sites](#)." In *International Conference on Machine Learning and Data Mining in Pattern Recognition*, Springer, USA, 2018, pp-168-182. ISBN: 978-3-319-96132-3, DOI: 10.1007/978-3-319-96133-0\_13, July 15-19, 2018 **(Web of Science indexed)**
10. **Pradeep Kumar Roy**, Jyoti Prakash Singh, and Amitav Nag, (2018) "[Finding Active Expert Users for Question Routing in Community Question Answering Sites](#)." In *International Conference on Machine Learning and Data Mining in Pattern Recognition*, Springer, USA, 2018, pp. 440-451, ISBN: 978-3-319-96132-3, DOI: 10.1007/978-3-319-96133-0\_33, July 15-19, 2018 **(Web of Science indexed)**
11. Jyoti Prakash Singh, **Pradeep Kumar Roy**, Sunil Kumar Singh, & Prabhat Kumar (2016, November). [Source location privacy using data mules in Wireless Sensor Networks](#). In *Region 10 Conference (TENCON)*, Singapore, ISBN: 978-1-5090-2598-5, 22-25, November, 2016 (pp. 2743-2747) **IEEE. (Web of Science indexed)**
12. **Pradeep Kumar Roy**, Jyoti Prakash Singh, and Prabhat Kumar (2016, March). [An efficient privacy preserving protocol for source location privacy in wireless sensor networks](#). In *International Conference on Wireless*

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*Communications, Signal Processing and Networking (WiSPNET)*, Chennai, India. (pp. 1093-1097), ISBN: 978-1-4673-9339-3, [10.1109/WiSPNET.2016.7566305](https://doi.org/10.1109/WiSPNET.2016.7566305), 23-25 March, 2016. **IEEE**. (**Web of Science indexed**)

13. **Pradeep Kumar Roy**, Jyoti Prakash Singh, Prabhat Kumar, and M. P. Singh (2015). [Source location privacy using fake source and phantom routing \(FSAPR\) technique in wireless sensor networks](#). *Third International Conference on Recent Trends in Computing, Procedia Computer Science*, Ghaziabad, India, ISSN: 1877-0509, DOI: [10.1016/j.procs.2015.07.486](https://doi.org/10.1016/j.procs.2015.07.486), 12-13 March, 2015 **Elsevier**, 57, 936-941. (**Scopus**)

## Professional Membership and Certification Details

1. Member of IEEE (Membership Number: 93057529)
2. Member of IAENG (Membership Number: 208225)
3. Certification in LaTeX from IIT Bombay

## Personal Information

**Present Address:** Assistant Professor, Department of Computer Science and Engineering, IIIT Surat, Kholvad Campus, Kamrej, Surat, Gujarat, India-394190.

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