

Dr. Sonal Jain
Ph.D Computer Science, UGC NET Computer Science

Professor, PG Department of Computer Science and Information Technology, Sardar Patel University, Vallabh VidhyaNagar, Gujarat

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h-index:19, i10-index:10

<https://spuvvn.irins.org/profile/281493>



Academic Qualification

- Ph.D. (Computer Science), Banasthali University, Rajasthan, July 2011.
Thesis Title: Development of Service Oriented Framework for Semantic Annotation of Learning Material.
- Qualified UGC-NET (Computer Science), December 2005.
- M. Sc. (Computer Science), School of Computer Science, Devi Ahilya University (DAVV), Indore with CGPA 9.29 (2000)
- B.Sc. (Computer Science) (Hons.), Devi Ahilya University (DAVV), Indore.

Work Experience: (25+ years)

- Professor, PG Department of Computer Science and Information Technology, Sardar Patel University, Vallabh VidhyaNagar, May 19, 2022- Till Date
- Professor, Department of Computer Science Engineering, JK Lakshmipat University, Jaipur (37400-10000 AGP), July 1, 2019 – May 18, 2022
- Associate Professor, Department of Computer Science Engineering, JK Lakshmipat University, Jaipur, 25 August 2012-June 20, 2019
- Associate Professor (Computer Science), GLS-Institute of Computer Technology, September 2011 – 24 August 2012.
- Associate Professor (Reader Scale 5th Pay), GLS Institute of Computer Technology, July 15, 2009-September 2011
- Assistant Professor (Lecturer), Gujarat Law Society-Institute of Computer Technology, April 20, 2004 – July 14, 2009.
- Assistant Professor (Lecturer), Gujarat Law Society-Institute of Computer Applications, June 2000 to April 19, 2004.
- Associated as visiting/guest faculty with GLS Center for Management Excellence, IBS Ahmedabad, ICFAI University and Gujarat University-Academic Staff College.

Subjects Taught:

Mobile Application Development, Web Technologies, Artificial Intelligence, Deep Learning, Machine Learning, Intelligent Machines, Web Data Management SAP: Basic Module, Computation Data Analysis, Computing using Python, Operating Systems & Linux, Computer Architecture & Organization, Computer based Optimization models, Computer Fundamentals and C, Data Base Management Systems (DBMS), Management Information Systems, Data and File Structures, Internet and HTML, Scientific & Statistical Computing, Advanced Database Management Systems, E-commerce and ASP, Basic Microcomputer Applications, Design & Analysis of Algorithms

Development of New Courses for Students of Engineering, Management and Commerce Streams

1. Computational Data Analysis: This 10-credit course is integration of Linear Algebra, Statistics and Python programming and has been delivered twice using Project based Learning approach. Co-Faculty: Dr. Umesh Gupta, Dr. Kavita Choudhary. Co-Developers: Dr. Siddhartan Govindasamy, Professor - Olin College of Engineering, USA, Dr. Sanjay Goel, Director, Institute of Engineering & Technology, Dr. Umesh Gupta, Dr. Kavita Choudhary.
2. Machine Learning: This 3 credit courses was designed and developed for B.Tech Computer Science Engineering Students and was delivered using Project based Learning approach. Co-Faculty: Dr. Alok Kumar, Co-developer: Dr. Siddhartan Govindasamy, Professor - Olin College of Engineering, USA, Dr. Alok kumar
3. Intelligent Automation (AI, Robotics and IoT): This 2 credit course was delivered to students of EE, ECE, ME, CE, CHE, BBA and B.Com using Case Study approach as tool.
4. Business and Intelligent Machines: This 3-credit course was designed and delivered for MBA Students with Mr. Asheesh Gupta, Pro-Vice Chancellor, JK Lakshmipat University.

Research interest areas:

Natural Language Processing, Information Retrieval, Artificial Intelligence, Machine Learning

Research Guidance:

- M.Tech (Computer Science) Dissertations: 05
- Ph.D: Awarded:04, Current Guidance: 3

Publications – Books/e-Modules:

1. Content Writing:" Functions in C++ module" for ePGpathshala project, Project PI: Dr. Savita Gandhi, Director, Department of Computer Science Engineering, Gujarat University, Ahmedabad.

2. Harshal Arolkar, **Sonal Jain**, Nilesh Modi and Tripti Dodiya (2013). *Computer Studies*, for Standard 11. Gandhi Nagar: Gujarat State Board of School Textbooks.
3. R. P. Soni, Harshal A. Arolkar and **Sonal Jain**, Working with Personal Computer Software, 2nd Ed.", Wiley India, August 2010, ISBN: 978-81-265-2727-4.
4. Harshal A. Arolkar and **Sonal Jain**, Simplifying C, Dreamtech Press, August 2010, ISBN: 978-93-5004-049-2.
5. Harshal Arolkar, **Sonal Jain**, M.T. Savaliya, J. M. Patel, Dolly Sansowa, (2009). *Introduction to Computers* for Standard 12. Gandhi Nagar: Gujarat State Board of School Textbooks.
6. Harshal Arolkar, **Sonal Jain**, S.M. Shah (2008). *Introduction to Computers* for Standard 11. Gandhi Nagar: Gujarat State Board of School Textbooks.
7. Harshal Arolkar, **Sonal Jain**, S.M. Shah, Jyotika Doshi, Girish Brahmabhatt, Kiran Amin, Yamini Patel (2006). *Introduction to Computers* for Standard 10. Gandhi Nagar: Gujarat State Board of School Textbooks.
8. Harshal Arolkar, D. B. Choksi, **Sonal Jain** (2005). *Introduction to Computers* for Standard 9. Gandhi Nagar: Gujarat State Board of School Textbooks.
9. D. B. Choksi, Harshal Arolkar, **Sonal Jain** (2004). *Introduction to Computers* for Standard 8. Gandhi Nagar: Gujarat State Board of School Textbooks.

Patent Granted

- Wildlife intrusion detection system empowered with Artificial intelligence, Application No: 2021100064, Australian Innovation Patent Grant, Filing Date: January 1, 2021, Grant date: March 31, 2021
- Solar Mobile Battery, Patent No. 114847, Design No. 360592-001, Date of Grant: March 14, 2022
- A System for Determining the Nature of Noise in Microarray Images, Federal Republic of Germany, Federal Republic of Germany, Publication No. and Date: De202022106319u1, 2022-12-07
- A Robust Security Management System for the Internet of Things (IoT), Federal Republic of Germany, Publication No. and Date: De202022106318u1, 2022-12-12

Patent Application Published:

- Sonal Amit Jain, Dr.Usha B A, Sathish Kumar T, Anupama H S, Dr.Kavitha K S, Dr. Anjan Kumar K N, Dr.Manjula V, Veeranna Kotagi, Students Posture and Gesture Detection System using Artificial Intelligence and Methods Thereof, Application No.202011046511 A, Journal No: 45/2020, Filing Date: October 25, 2020, Publication Date : 06/11/2020,

India.

- Dr Raghavi K Bhujang, Dr Sonal Jain, Dr. Sumati Ramakrishna Gowda, Dr. D.M Mahesha, Dr.Poornima Y, Dr Natesh M, Dr. Loshma Guniseti, Dr. Sindhu Menon, Dr Piyush Kumar Pareek, Interactive Multimedia Performance Assessment System, Application No.202141008086 A, Filing Date: 25/02/2021, Publication Date: 05/03/2021

Patent Application Filled:

- Piyush Kumar Pareek, Joe Lopez, Sunil P Ujagare, Sonal Amit Jain, Digital Smart Board, Application Number: 360575-001, Filed Date: 14/03/2022

Special Issue: Guest Editor Role

Sunil Pathak, Sonal Jain, Samarjeet Borah, Special Issue on Scope and Future of Machine Learning, Artificial Intelligence, and Big Data Analytics in Healthcare, International Journal of Big Data and Analytics in Healthcare (IJBDAA) 6(1) (<https://www.igi-global.com/ijbdah>), <https://www.igi-global.com/journals/open-access/table-of-contents/international-journal-big-data-analytics/126509>, 2021

Projects

Early and Automated Diagnosis of Dysgraphia using Deep Neural Network by Science for Equity Empowerment and Development Division of the Department of Science and Technology, GoI. Total Cost: 18,00,000, File Number: SEED/TIDE/2019/705 Role: Co-PI, Date of Commencement: 25-02-2021, Date of Completion: 25-02-2023

Published Papers in Journals (International):

1. Bhandari, S., Pathak, S., Jain (2025), S.A. et al. SACOENet: an advanced segment anything model enhanced with self-calibrated convolutions and optimized EfficientNetB7 for precise diabetic retinopathy detection. Network Modeling Analysis in Health Informatics and Bioinformatics, 14(1), Article 41 (2025). <https://doi.org/10.1007/s13721-025-00530-4> , **Scopus**, June 2025
2. Sharma, P., Agarwal, B., Yadav, G.S., Jain S. Vision transformer-based model for early detection of dysgraphia among school students. Microsystems Technologies (2024). <https://doi.org/10.1007/s00542-024-05741-9>, **SCIE**, **Scopus**, August 2024, Volume 31, pages 775–785
3. Bhandari, S., Pathak, S., Jain, S.A. et al. (2024), Improved diabetic retinopathy severity classification using squeeze-and-excitation and sparse lightweight multi-level attention u-net with transfer learning from xception. Acta Diabetol (2024). <https://doi.org/10.1007/s00592-024-02341-x>, July 2024, **SCIE**, Electronic ISSN: 1432-5233, July 2024, Volume 62, pages 95–112

4. Agarwal, B., Jain, S., Beladiya, K. et al., (2023), Early and Automated Diagnosis of Dysgraphia Using Machine Learning Approach. SN COMPUT. SCI. 4, 523. <https://doi.org/10.1007/s42979-023-01884-0>, Scopus, ISSN: 2661-8907, July 2023
5. Bhandari, S., Pathak, S. & Jain, S.A. (2022), A Literature Review of Early-Stage Diabetic Retinopathy Detection Using Deep Learning and Evolutionary Computing Techniques. Arch Computat Methods Eng (March 2022), Vol. 30, pp. 799–810. September 2022, <https://doi.org/10.1007/s11831-022-09816-6> (**SCIE**), **ISSN:** 1886-1784,
6. Jadwal, P.K., Pathak, S. & Jain, S. Analysis of clustering algorithms for credit risk evaluation using multiple correspondence analysis. Microsystems Technologies (May 2022). <https://doi.org/10.1007/s00542-022-05310-y>, (**SCI**)
7. Jadwal, P.K., Jain, S., Pathak, S. et al., (2022), Improved resampling algorithm through a modified oversampling approach based on spectral clustering and SMOTE. Microsystems Technologies , April 2022, <https://doi.org/10.1007/s00542-022-05287-8>, (**SCI**)
8. Rijwani, P., & **Jain, S**, (2022), Software Effort Estimation Development from Neural Networks to Deep Learning Approaches, Journal of Cases on Information Technology (JCIT) 24(4), March, 2022, DOI: 10.4018/JCIT.296715, IGI Global Publishers, ISSN: 1548-7717, EISSN: 1548-7725, **ESCI, Scopus**
9. Jadwal, P. K., Jain, S., & Agarwal, B. (2021). Clustering-based hybrid resampling techniques for social lending data. International Journal of Intelligent Systems Technologies and Applications, Special Issue on: Recent Advancements in Artificial Intelligence Systems and Their Applications, 20(3), 183-198. ISSN online, 1740-8873, ISSN print:1740-8865, <https://doi.org/10.1504/ijista.2021.120495> (**Scopus**)
10. Dubey, A. K., Gupta, U., **Jain, S**. (2021). Medical Data Clustering and Classification Using TLBO and Machine Learning Algorithms. CMC-Computers, Materials & Continua, Special Issue: Role of Machine Learning and Evolutionary Algorithms for Cancer Detection and Prediction, 70(3), pp.4523-4543, July 2021, ISSN: 1546-2218 (Print), ISSN: 1546-2226 (Online), doi:10.32604/cmc.2022.021148 (**SCI, Scopus**)
11. Jadwal, P. K., Jain, S., & Agarwal, B. (2020). Spectral Clustering and Cost-Sensitive Deep Neural Network-Based Undersampling Approach for P2P Lending Data. International Journal of Information Technology and Web Engineering (IJITWE), 15(4), 37-52. doi:10.4018/IJITWE.2020100103 (**Scopus, ESCI**)
12. Jadwal, P., Jain, S., Agrawal B., (2020), Financial credit risk evaluation model using machine learning based approach , Special Issue on: Role of Artificial intelligence in entrepreneurship and business management, World Review of Entrepreneurship, Management and Sustainable Development, ISSN: 1746-0581, 16 (6), Inderscience Publishers, doi: 10.1504/WREMSD.2020.111383 (**Scopus Indexed**)

13. Gupta, Umesh, Jain, Sonal, Kumawat, Dharmendra and Sharma, Roopali, Clustering of Water Reservoirs based on Water Chemical Analysis, International Journal of Research in Advent Technology (IJRAT), 7(6S), (2019): 274-277, ISSN: 2321-963 doi: 10.32622/ijrat.76S201954
14. Pathak, S., & Jain, S.,(2019), Comparative study of clustering algorithms for MANETs, Journal of Statistics and Management Systems, Taylor and Francis Publishers, 22(4), 653-664 (**ESCI**), ISSN: 0972-0510, doi: 10.1080/09720510.2019.1609723
15. Pathak, S., & Jain, S.,(2019) A Priority Based - Weighted Clustering Algorithm for Mobile Ad Hoc Network, International Journal of Communication Networks and Distributed Systems, InderScience Publishers, 22(3), pp. 313 - 328, ISSN online: 1754-3924, ISSN print: 1754-3916, doi: 10.1504/IJCND.2019.098872, (**Scopus , ESCI**)
16. Rijwani, P., & **Jain, S.** (2018), Level of Confidence in Software Effort Estimation by an Intelligent Fuzzy – Neuro - Genetic Approach, International Journal of Advanced Computer Science and Applications (IJACSA), 9(9), 2018. ISSN: 2156-5570, doi: 10.14569/IJACSA.2018.090972 (**Scopus Indexed**)
17. Dubey, A. K., Gupta, U., & **Jain, S.** (2018), Comparative Study of K-means and Fuzzy C-means Algorithms on The Breast Cancer Data, International Journal on Advanced Science, Engineering and Information Technology, 8(1), pages: 18-29, ISSN: 2088-5334, doi:10.18517/ijaseit.8.1.3490 (**Scopus Indexed**)
18. Jain, A., Jain Shubham., **Sonal Jain** (2017), Customer Engagement through Social Media: Learnings from Hospitality Industry in India, International Journal of the Computer, the Internet and Management , 25(2), (May-August, 2017) pp. 41-48, ISSN: 0858-7027
19. Pathak, S., & **Jain, S.** (2017). An optimized stable clustering algorithm for mobile ad hoc networks. EURASIP Journal on Wireless Communications and Networking, 2017(1), pp. 51-59, ISSN: 1687-1499, doi: 10.1186/s13638-017-0832-4 (**Scopus Indexed, SCIE**)
20. Dubey, A. K., Gupta, U., & **Jain, S.** (2016). Epidemiology of lung cancer and approaches for its prediction: a systematic review and analysis. Chinese Journal of Cancer, 35, pp. 71-78, ISSN: 2523-3548, doi:10.1186/s40880-016-0135-x, (**Scopus Indexed, SCIE**)
21. Gupta, U., & **Jain, S.** (2016), Impact of School Education on Performance in Higher Education (A Study on Engineering Students), International Journal of Technical Research & Science, ISSN NO : 2454-2024(Online), 1(3), 31-35
22. Dubey, A. K., Gupta, U., & **Jain, S.** (2016), Analysis of k-means clustering approach on the breast cancer Wisconsin dataset, International Journal of Computer Assisted Radiology and Surgery, doi: 10.1007/s11548-016-1437-9, Print ISSN 1861-6410, Online ISSN 1861-6429, 11(11), pp 2033–2047, Springer Berlin Heidelberg (**Scopus, SCIE**)
23. **Jain S.**, Singhal M., & Shah A., (2016), Exploring the Usage of Existing Plagiarism Tools

for Automated Student Assessment for Java Program, International Journal of Information and Education Technology, 6(3), pp. 219-223, ISSN: 2010-3689., <http://www.ijiet.org/vol6/688-TD043.pdf> (**Scopus**)

24. Dodiya, T., **Jain, S.** (2016), Speech Recognition System for Medical Domain, (IJCSIT) International Journal of Computer Science and Information Technologies, 7 (1), 185-189, ISSN 0975-9646, <https://ijcsit.com/docs/Volume%207/vol7issue1/ijcsit2016070141.pdf>
25. Pathak, S., & **Jain, S.**, (2015) A novel weight based clustering algorithm for routing in MANET, Wireless Networks: The Journal of Mobile Communication, Computation and Information, Springer Science, 22(8) , pp. 2695-2704, ISSN 1022-0038, doi: doi: 10.1007/s11276-015-1124-8 (**SCI, Scopus Indexed**)
26. P. Khanna, **S. Jain** (2015), Cloud Broker Definition Differential: Gartner Versus NIST and New Models, International Journal of Engineering Technology Science and Research, ISSN 2394 – 3386, Volume 2, pp. 127-132, September
27. Dubey, A. K., Gupta, U., & **Jain, S.** (2015), Breast Cancer Statistics and Prediction Methodology: A Systematic Review and Analysis, Asian Pacific Journal of Cancer Prevention 16 (10), pp. 4237-4245, ISSN: 1513-7368, doi: 10.7314/apjcp.2015.16.10.4237, (**Scopus Indexed, SCIE**)
28. P. Khanna, **S. Jain** and B. Babu (2015), Distributed cloud brokerage: solution to real world service provisioning problems, Asian Research Publishing Network Journal of Engineering and Applied Sciences. 10(5), pp. 2011-2016, ISSN: 1819-6608, http://www.arpnjournals.com/jeas/research_papers/rp_2015/jeas_0315_1706.pdf (**Scopus Indexed**)
29. Rijwani, P. and **Jain, S.**, Santani D., (2014) Software Effort Estimation: A Comparison Based Perspective, International Journal of Application or Innovation in Engineering & Management (IJAIEEM), 3 (12), pp. 18-29, December 2014, ISSN: 2319 – 4847, <https://www.ijaiem.org/Volume3Issue12/IJAIEEM-2014-12-09-18.pdf> (**Scopus**)
30. Pathak, S., & **Jain, S.** (2014), A Status based cluster head election algorithms for mobile Ad Hoc Networks, Elixir Network Engineering, 77 (2014), pp. 29093-29097, ISSN: 2229-712X, [https://www.elixirpublishers.com/articles/1418015067_77%20\(2014\)%2029093-29097.pdf](https://www.elixirpublishers.com/articles/1418015067_77%20(2014)%2029093-29097.pdf)
31. P. Khanna, **S. Jain** (2014), Live Performance of Cloud Brokers in a Federation, International Journal of Science and Research, 3(12), pp. 1755-1760, December 2014, ISSN (Online): 2319-7064
32. Rijwani, P. and Jain, S., Santani D. (2014), Comparison and Analysis of Various Artificial Neural Networks for Software Effort Estimation, International Journal of Advanced Research in Computer Science and Software Engineering, 4(12), ISSN: 2277-6451, pp. 699- 705, December 2014

33. Pathak, S., & **Jain, S.** (2013). A Survey: On Unicast Routing Protocols for Mobile Ad Hoc Network, International Journal of Emerging Technology & Advanced Engineering, 3(1), pp. 204-210, ISSN: 2250-2459, https://www.ijetae.com/files/Volume3Issue1/IJETAE_0113_31.pdf, (**Scopus**)
34. **Jain, S.**, Pareek, J. (2013). Automatic Extraction of Prerequisites and Learning Outcome from Learning Material. International Journal of Metadata, Semantics and Ontologies 8.2, Special Issue on New Challenges in Resource Discovery, 8(2) ,pp. 145-154, ISSN: 1744-2621, Inderscience Publishers, doi: 10.1504/IJMSO.2013.056601 .(**Scopus Indexed**)
35. **Jain, S.**, Pareek, J. (2012), Automatic Identification of Learning Object Type, International Journal of Computer Applications, 42(7), pp. 7-10, March 2012. Published by Foundation of Computer Science, New York, USA, ISSN: 0975 – 8887, doi: 10.5120/5703-7687
36. Madan Mohan Nagar, Sunil Pathak, **Sonal Jain**, (2012), Design of Energy Efficient MAC Protocol with Increased Throughput in MANET's, International Journal of Engineering and Innovative Technology (IJEIT), 2(5), November 2012, 221-226, ISSN: 2277-3754
37. Axita Shah, **Sonal Jain** (2011), An Agent based Personalized Intelligent e-learning, International Journal of Computer Applications, 20(3) pp. 40-45, April 2011, Foundation of Computer Science, New York, USA, ISSN: 0975 – 8887, doi: 10.5120/2411-3215

Published Papers in Journals (National):

1. Pathak, S., & **Jain, S.**, Related Issues in Cluster Based Routing Protocols for Mobile Ad-hoc Networks (MANETs), Shodh Darpan, JKLU Monograph Series 04/2014, 34-45
2. **Jain, S.** & Jain A, transforming education using e-learning, Indian Journal of Training and Development, Vol. XXXV No. 4 Oct-Dec 2005, pp. 112-124, ISSN: 0971-5592.
3. **Jain, S.** & Jain A, e-portfolio – A valuable learning and Assessment tool in higher education, University News, Vol. 44 No. 3, Mar27-April 02 2000, pp 9-12, 17, ISSN: 0566-2257
4. **Jain, S.** & Jain A, Consumer Protection in e-services, Synergy Journal of Management Vol. 7&8, Nos. 1 & 2, January 2005-December 2006, pp. 1-8, 0973-922x

Articles / Chapters published in Books/ Full Papers in Conference Proceedings

1. Sonal Jain, Umesh Gupta, Priti Srinivas Sajja, Adopting Automation for Assessments in Higher Education: Benefits, Challenges and Future Directions, (2025), Navigating Higher Education Through NEP 2020, Metrics of Excellence and Digital Virtues, Eds: Sonal Singh & Bhaw Nath Pandey, EDSOL Informatics Pvt. Ltd., ISBN: 978-81-980402-2-0, June
2. Pankaj Kumar Jadwal, Sonal Jain and Bhupesh Kumar Singh (2024), Conditions for Optimal Oversampling: A Mathematical Analysis of SMOTE and Borderline-SMOTE,

Industry 4.0: Data and its Analysis in Business and Finance, edited by: Rakhi Gupta & Divya Chowdhry, ISBN: 9789358873306, New age publishers

3. Agarwal, B., Jain, S., Bansal, P., Shrivastava, S., Mohan, N. (2023). Dysgraphia Detection Using Machine Learning-Based Techniques: A Survey. In: Rathore, V.S., Tavares, J.M.R.S., Piuri, V., Surendiran, B. (eds) Emerging Trends in Expert Applications and Security. ICE-TEAS 2023. Lecture Notes in Networks and Systems, vol 681. Springer, Singapore. https://doi.org/10.1007/978-981-99-1909-3_28, June 2023
4. S. Bhandari, S. Pathak, S. Jain and V. Deshmukh (2022), "A Review on Swarm intelligence & Evolutionary Algorithms based Approaches for Diabetic Retinopathy Detection," 2022 IEEE World Conference on Applied Intelligence and Computing (AIC), 2022, pp. 161-166, doi: 10.1109/AIC55036.2022.9848841.
5. Monish, E.S., Sharma, A., Agarwal, B., Jain, S. (2022). Game-Based Learning System for Improvising Student's Learning Effectively: A Survey. In: Balas, V.E., Sinha, G.R., Agarwal, B., Sharma, T.K., Dadheech, P., Mahrishi, M. (eds) Emerging Technologies in Computer Engineering: Cognitive Computing and Intelligent IoT. ICETCE 2022. Communications in Computer and Information Science, vol 1591. Springer, Cham. https://doi.org/10.1007/978-3-031-07012-9_1
6. Gupta U., Jain S., Kumawat D. (2021) Water Quality Based Zonal Classification of Rajasthan Using Clustering. In: Borah S., Pradhan R., Dey N., Gupta P. (eds) Soft Computing Techniques and Applications. Advances in Intelligent Systems and Computing, vol 1248. Springer, Singapore. https://doi.org/10.1007/978-981-15-7394-1_41
7. Pathak S., Jain S., Borah S. (2021) Clustering Algorithms for MANETs: A Review on Design and Development. In: Borah S., Pradhan R., Dey N., Gupta P. (eds) Soft Computing Techniques and Applications. Advances in Intelligent Systems and Computing, vol 1248. Springer, Singapore. https://doi.org/10.1007/978-981-15-7394-1_51
8. Dubey A.K., Gupta U., **Jain S.** (2020) Computational Measure of Cancer Using Data Mining and Optimization. In: Karrupusamy P., Chen J., Shi Y. (eds) Sustainable Communication Networks and Application. ICSCN 2019. Lecture Notes on Data Engineering and Communications Technologies, vol 39. Springer, Cham, DOI: https://doi.org/10.1007/978-3-030-34515-0_65, Print ISBN: 978-3-030-34514-3, Online ISBN: 978-3-030-34515-0 (**Scopus Indexed**)
9. Khangarot, Harshita and **Jain, Sonal** and Gupta, Umesh (2019), Framework for Managing Collection of E-Waste in Household (October 3, 2019). Proceedings of International Conference on Advancements in Computing & Management (ICACM) 2019, <http://dx.doi.org/10.2139/ssrn.3463682>
10. **Jain S.**, Khangarot H., Singh S. (2019) Journal Recommendation System Using Content-Based Filtering. In: Kalita J., Balas V., Borah S., Pradhan R. (eds) Recent Developments in

Machine Learning and Data Analytics. Advances in Intelligent Systems and Computing, vol 740., ISBN: 978-981-13-1279-3, September 2018, Springer, Singapore **(Scopus Indexed)**

11. Jadwal, Pankaj Kumar, Sonal Jain, Umesh Gupta, and Prashant Khanna (2019). Clustered Support Vector Machine for ATM Cash Repository Prediction. In Progress in Advanced Computing and Intelligent Engineering, pp. 189-201. Springer, Singapore, ISBN: 978-981-13-1707-1., <https://www.springerprofessional.de/en/clustered-support-vector-machine-for-atm-cash-repository-predict/17704016>
12. Jadwal, P.K., **Jain, S.**, Gupta, U., Khanna, P., (2018) K-Means Clustering with Neural Networks for ATM Cash Repository Prediction, Satapathy S., Joshi A. (eds), Smart Innovation, Systems and Technologies, Springer, 2190-3018, Page no. 598, ISBN: 978-3-319-63673-3 **(Scopus Indexed)**
13. Gupta, U., **Jain, S.**, Bhatia, M. (2018), Mean Reversion with Pair Trading in Indian Private Sector Banking Stocks, Satapathy S., Joshi A. (eds), Smart Innovation, Systems and Technologies, Springer, 2190-3018, Page no. 384, ISBN: 978-3-319-63673-3 **(Scopus Indexed)**
14. T. Dodiya and S. Jain, (2017), Question classification for medical domain Question Answering system, 2016 IEEE International WIE Conference on Electrical and Computer Engineering (WIECON-ECE), Pune, IEEE Explore, pp. 204-207. doi: 10.1109/WIECON-ECE.2016.8009118, e-ISBN: 978-1-5090-3745-2 **(Scopus Indexed)**
15. Rijwani, P. and Jain, S, (2016), Enhanced Software Effort Estimation Using Multi Layered Feed Forward Artificial Neural Network Technique, Procedia Computer Science, Elsevier Publishers, Volume 89, 2016, Pages 307-312, Twelfth International Conference on Communication Networks, ICCN 2016, August 19-21, 2016, Bangalore, India, ISSN 1877-0509 (Scopus Indexed)
16. Khanna, P.; **Jain, S.**; Babu, B.V., (2015), BroCUR: Distributed cloud broker in a cloud federation: Brokerage peculiarities in a hybrid cloud, International Conference on Computing, Communication & Automation (ICCCA), IEEE Explore, July-2015, pp.729-734, 15-16 May 2015, eISBN: 978-1-4799-8890-7, doi: 10.1109/CCAA.2015.7148472 **(Scopus Indexed)**
17. A.K. Dubey, U. Gupta, and **S. Jain** (2014), A Survey on Breast Cancer Scenario and Prediction Strategy, 2014, S.C. Satapathy et al. (eds.), Proc. of the 3rd Int. Conf. on Frontiers of Intelligent Computing (FICTA) 2014, – Vol. 1, Advances in Intelligent Systems and Computing 327, DOI: 10.1007/978-3-319-11933-5_40, ISBN: 978-3-319-11932-8, Springer International Publishing Switzerland 2015 **(Scopus Indexed)**
18. Khanna, P.; **Jain, S.**, Distributed Cloud Federation Brokerage: A Live Analysis in: proc. 7th

IEEE/ACM International Conference on Utility and Cloud Computing (UCC), 8-11 Dec. 2014, London UK, IEEE 2014, pp. 738-743, eISBN: 978-1-4799-7881-6, doi: 10.1109/UCC.2014.120 **(Scopus Indexed)**

19. Pathak, Sunil; Dutta, Nitul; **Jain, Sonal**, "An Improved Cluster Maintenance Scheme for Mobile AdHoc Networks," International Conference on Advances in Computing, Communications and Informatics (ICACCI, 2014, vol., no., pp.2117,2121, 24-27 Sept. 2014, , IEEE Explore, Print ISBN: 978-1-4799-3078-4, doi: 10.1109/ICACCI.2014.6968281 **(Scopus Indexed)**
20. Khanna, Prashant; **Jain, Sonal**; Babu B. V,(2014), Cloud Broker: Working in federated structures, International Conference on Advances in Computing, Communications and Informatics (ICACCI, 2014), vol., no., pp.1273,1278, 24-27 Sept. 2014, IEEE Explore, Print ISBN: 978-1-4799-3078-4, doi: 10.1109/ICACCI.2014.6968660 **(Scopus Indexed)**
21. Dodiya, T., Jain, S. (2012). Comparison of Question Answering Systems. In: Abraham, A., Thampi, S. (eds) Intelligent Informatics. Advances in Intelligent Systems and Computing, vol 182. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-32063-7_12, ISBN: 978-3-642-32063-7 International Symposium on Intelligent Informatics (ISI'12) held in Chennai, India during August 4-5, 2012 **(Scopus Indexed)**
22. Jyoti Pareek, Sonal Jain, Hiral Parmar, Manisha Chavda (2012), Integrated System for Opinion Extraction and Sentiment Analysis for Tourism, International Conference on Information, Knowledge & Research in Engineering, Technology & Sciences – 2012, ISBN No. 978-81-906220-3-5, 24-25 March, 2012, G. K. Bharad Institute of Engineering, Rajkot.
23. Axita Shah, **Sonal Jain**, Rushabh Chheda, Avni Mashru, "Model for Re-ranking Agent on Hybrid Search Engine for E-learning", T4E, 2012, 2012 IEEE Fourth International Conference on Technology for Education, , pp. 247-248, September 2012, ISBN: 978-1-4673-2173-0, doi:10.1109/T4E.2012.55 **(Scopus Indexed)**
24. S. Jain and J. Pareek, 2010, "Automatic identification of Granularity level of learning document," *2010 International Conference on Technology for Education*, Mumbai, India, 2010, pp. 72-75, doi: 10.1109/T4E.2010.5550057, ISBN: 978-1-4244-7362-5. **(Scopus Indexed)**
25. **Jain, S.**, Pareek, J. (2010), Automatic Topic(s) Identification from Learning material: An Ontological Approach, IEEE Explore, Print ISBN 978-0-7695-3982-9, DOI: 10.1109/ICCEA.2010.221 , April 2010 **(Scopus Indexed)**
26. **Jain, S.**, Pareek, J., (2009) KeyPhrase Extraction Tool (KET) for Semantic Metadata Annotation of Learning Materials, IEEE Explore, Print ISBN: 978-0-7695-3654-5, INSPEC Accession Number: 10789145, Digital Object Identifier: 10.1109/ICSPS.2009.192, July 2009 **(Scopus Indexed)**

Publications – Monographs

1. Santosh Dhar, **Sonal Jain** (Eds.), Shodh-Darpan, Collection of Papers presented in Shodh 2013, Doctoral Conference. JKLU Monograph Series, 04/2014. Jaipur: JK Lakshmipat University.

Editorial

1. Upinder Dhar, Santosh Dhar and **Sonal Jain** (2013). Research: The Quest for Originality. *Saransh*, Proceedings of the Doctoral Conference, JK Lakshmipat University, Jaipur.

Publications - Souvenirs: The Compendiums of Research Abstracts

1. Upinder Dhar, Santosh Dhar and **Sonal Jain** (Eds.), Saransh 2014, Souvenir of the Shodh 2014: Second Doctoral Conference. Jaipur: JK Lakshmipat University, July 5.
2. Upinder Dhar, Santosh Dhar and **Sonal Jain** (Eds.), Saransh 2013, Souvenir of the Shodh 2013: Doctoral Conference. Jaipur: JK Lakshmipat University, July 6.
3. Santosh Dhar, Kanad Ray, **Sonal Jain**, Umesh Gupta (Eds.), Pragyaan 2012, Souvenir of the Second International Conference on 'Soft Computing for Problem Solving' (SocProS 2012). Jaipur: Institute of Engineering and Technology, JK Lakshmipat University. December 28 – 30.

Papers Presented- International Conferences:

1. Sonal Jain, Medha Chippa, Priti Sajja, Basant Agarwal, Prateek Sharma, Early and Automated Identification of Dysgraphia using Deep Convolution Networks, 3rd International Conference on Women in Science & Technology: Creating Sustainable Career organized by BVM, Vallabh Vidhya nagar, 28-30 December 2023
2. PV Virpariya, Sonal Jain, Cultivating Success: Harnessing the power of Artificial Intelligence, Driving Agriculture Forward: Recent Trends and Innovations in Agricultural Market Intelligence, Organized by Centre for Agricultural Market Intelligence under NAHEP-CAAST In Collaboration with School of Computer, Data & Mathematical Science, Parramatta, Western Sydney University, Australia, December 11-13, 2023
3. Basant Agarwal, Sonal Jain, Priyal Bansal, Sanatan Shrivastava, and Navyug Mohan, Dysgraphia Detection Using Machine Learning Based Techniques: A Survey” Special session on the theme “Educational Practices for Special Needs, INTERNATIONAL CONFERENCE on SUSTAINABLE FUTURE: INNOVATIONS IN EDUCATION, (February 25-26, 2022)
4. Pankaj Jadwal, Sunil Pathak, Sonal Jain, Assessment of Clustering Algorithms for Credit risk evaluation applied on Factorial co-ordinates obtained using Multiple Correspondence Analysis, Computing, Communication and Sensor Network, organized by Applied Computer Technology, Kolkatta in association with International Association of Science,

Technology and Management, October 2-4, 2021 (Online Mode)

5. Pankaj Jadwal, Sonal Jain, Sunil Pathak, Basant Agarwal, Improved Sampling algorithm through a modified oversampling approach based on Spectral Clustering and SMOTE, Computing, Communication and Sensor Network, organized by Applied Computer Technology, Kolkatta in association with International Association of Science, Technology and Management, October 2-4, 2021 (Online Mode)
6. Sonal Amit Jain, Umesh Gupta, Dharmendra Kumawat, Water Quality Based Zonal Classification of Rajashtan using Clustering, The third International Conference on Computing and Communication (IC3-2020), 13-14 July 2020, Sikkim Manipal Institute of Technology, Sikkim.
7. Khangarot Harshita., Jain Sonal., Gupta U., Framework for managing collection of E-waste in Household, International Conference on Advancement in Computing & Management (ICACM-2019), Jagannath University, Jaipur, April 13-14, 2019
8. Umesh Gupta, Sonal Jain, Dharmendra Kumawat, Roopali Sharma, Clustering of Water Reservoirs based on Water Chemical Analysis, International Conference on Innovations in Technology and Management for Achieving Sustainable Development Goals (SDGs)", Feb. 1-3, 2019, JK Lakshmipat University, Jaipur
9. Harshita Khangarot, Umesh Gupta, Sonal Jain, A Survey of User's Perception Concerning e-waste Management (Presented along with Co-Author), 6th International Conference on "Green, Growth, Globalization, Governance and GST: Challenges and Opportunities, 2018, Jaipur
10. Pankaj Jadwal, Umesh Gupta, Sonal Jain, Clustered Support Vector Machine for ATM Cash Repository Prediction, (Presented by Pankaj Jadwal), International Conference on Advanced Computing and Intelligent Engineering, ICACIE 2017, organized at Central University of Rajasthan, Kishangarh, Rajasthan (Mentioned in Proceedings)
11. Sonal Jain, Harshita Khangarot, Shivank Singh, Journal Recommendation System using Content Based Filtering Approach, (Presented by Co-Author), Second International Conference on Computing and Communication organized by Sikkim Manipal University, 2018, Sikkim (Mentioned in Proceedings)
12. Pankaj Kumar Jadwal, Sonal Jain, Umesh Gupta, Prashant Khanna, K-Means Clustering with Neural Networks for ATM Cash Repository Prediction, The 2nd International Conference on Information and Communication Technology for Intelligent Systems, Ahmedabad, March 25-26, 2017. (Mentioned in Proceedings)
13. Pankaj Jadwal, Sonal Jain, Umesh Gupta, Prashant Khanna, Review of Machine Learning Approaches for Prediction of Cash in ATMs, International Conference on Green, Growth, Globalization and Governance: Challenges and Opportunities, held at JK Lakshmipat University, Jaipur, 3-5, February, 2017, presented by co-author, Pankaj Jadwal.

14. Ankita Mathur, Umesh Gupta, Sonal Jain, Regression Modelling of Water Chemical Parameters on clustered water reservoirs, International Conference on Green, Growth, Globalization and Governance: Challenges and Opportunities, held at JK Lakshmipat University, Jaipur, 3-5, February, 2017, presented by co-author, Ankita Mathur.
15. Amit Jain, Shubham Jain, Sonal Jain, Customer Engagement through Social Media: Learnings from Hospitality Industry in India, The thirteenth International Conference on eLearning for Knowledge-Based Society "Theory and Practices in eLearning 2016 and Future", Siam Technology College, Bangkok, Thailand, December 15, 2016, (Presented by co-author)
16. Tripti Dodiya, Sonal Jain, Question classification for Medical Domain Question Answering Systems, IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering (WIECON-ECE 2016), Organized by All India Shri Shivaji Memorial Society's Institute of Information Technology, Pune 19-21, December 2016, (Presented by Coauthor, Tripti Dodiya)
17. Khanna, P., **Jain, S.**, Babu, B.V., Distributed Cloud Brokerage: Solution to Real World Service Provisioning Problems, 2nd International Symposium on Big Data and Cloud Computing Challenges (ISBCC-15), Mar 2015, Kochi, India (presented by Khanna, Prashant)
18. **Sonal Jain**, Mayuri Singhal, Axita shah, Exploring the Usage of Existing Plagiarism tools for Automated Student Assessment for Java Program, 6th International Conference on Computer Technology and Development (ICCTD 2014) , 7-9 November 2015, Hongkong,
19. Ashutosh Kumar Dubey, Umesh Gupta, **Sonal Jain** (2014), A Survey on Breast Cancer Scenario and Prediction Strategy, Third International Conference on Frontiers of Intelligent Computing: Theory and applications (FICTA), Bhubaneswar, Orissa, 14-15 November 2014 (Presented by Coauthor, Ashutosh kumar Dubey)
20. Sonal Jain, Tripti Dodiya, Rule Based Architecture of QA Systems, International Conference on Soft Computing for Problem Solving, 28-30 December 2012, JK Lakshmipat University, Jaipur (**Scopus Indexed**)
21. **Sonal Jain**, Maitri Jhaveri, Mayur Patel, NewsForMe: RSS feed based Customized News letter Generation, 7th International Conference on ITAM at JKLJU, Jaipur, December 28-29, 2011.
22. Jyoti Pareek, **Sonal Jain**, Hiral Parmar, Manisha Chavda, Integrated System for Opinion Extraction and Sentiment Analysis for Tourism, International Conference on Information, Knowledge & Research in Engineering, Technology & Sciences – 2012, ISBN: 978-81-906220-3-5, 24-25 March, 2012, G. K. Bharad Institute of Engineering, Rajkot.
23. **Sonal Jain**, Jyoti Pareek, Automatic Identification of Granularity level of learning document, International conference on Technology for Education-2010 held at IIT

Mumbai, July 1-3, 2010. (Mentioned in Proceedings)

24. **Sonal Jain**, Jyoti Pareek, "KeyPhrase Extraction Tool (KET) for Semantic Metadata Annotation of Learning Materials" International conference on Computer Design and Application held at Nanyang Technological University, Singapore, May 15-17, 2009. (Mentioned in Proceedings)

Papers Presented- National Conferences:

1. Mayuri Singhal, **Sonal Jain**, Plagiarism in Student Assignment Submissions: A review of Practice and Prevention Steps, National Conference on Science and Engineering, July 27-28, 2014, JK Lakshmipat University, Jaipur. Presented by co-author.
2. Prashant Khanna, **Sonal Jain**, Cloud Broker: Differential Between Gartner and NIST, National Conference on Science and Engineering, July 27-28, 2014, JK Lakshmipat University, Jaipur, Presented by Prashant Khanna
3. Ashutosh Dubey, **Sonal Jain**, Umesh Gupta, An Automated Data Preparation and Security Mechanism for Web Data, SHODH-2014, July 5, 2014, Second Doctoral Conference, JK Lakshmipat University, Jaipur (Presented by Co-author, Ashutosh Dubey).
4. Poonam Rijwani, **Sonal Jain**, Review of Software Effort Estimation Techniques, SHODH-2014, Second Doctoral Conference, JK Lakshmipat University, Jaipur (Presented by Co-author).
5. Prashant Khanna, **Sonal Jain**, Application Brokering in a Federated Clouds, SHODH-2014, Second Doctoral Conference, JK Lakshmipat University, Jaipur (Presented by Co-author).
6. **Sonal Jain**, Deep Shah, Ashish Joshi, Rule-based Architecture of Question Answering System for Commerce Professional, " National Conference on Technology and Management, Visnagar, Gujarat, 20-21 January 2012. Presented by co-author.
7. **Sonal Jain**, Amit Jain, e-portfolio: A valuable tool for learning and assessment in information era, National Conference at G. H. Patel Institute of Management and Research, Vidhyanagar, February 11, 2006. Presented by co-author.
8. **Sonal Jain**, Amit Jain, eLearning and Knowledge management , National level seminar on Intelligent Information Retrieval and Processing organized by Shri Ramchandra Institute of Technology, Bardoli, 29-30 April, 2006
9. **Sonal Jain**, Amit Jain, e-services and Strategies for sustainable growth, Anvesh- National level conference organized by Nirma University- Institute of Management, Ahmedabad, (March 18-19, 2006).
10. **Sonal Jain**, Amit Jain, Consumer Protection in e-services, at a UGC Sponsored National level seminar organized by G. H. Patel Post graduate institute of management, Sardar Patel University, Vallabh Vidyanagar Gujarat. (February 2006)
11. **Sonal Jain**, Amit Jain, e-portfolio-a valuable tool connecting faculty employer and

students, E-biz summit national level seminar and paper presentation contest organized by SEMCOM (Charotar Vidya mandal), January 7-8, 2006.

Executive Development/Faculty Development/Training Programmes conducted:

1. Have conducted sessions on ICT for Teaching and Learning, Collaborative tools for research, Generative AI for reputed universities
2. Delivered Sessions on Deep Learning in refresher course conducted by MMTTC, SPU, Vallabh Vidhyanagar (31/01/24, 02/2/24)
3. Conducted Session on ICT For teaching and Learning in NEP Orientation and Sensitization Programme, conducted by MMTTC DAVV Indore(30/12, 19/01,24/01,19/02), MMTTC Iswar Saran PG College(29/12/24, 20/10/24), MMTTC IIT Patna (30/12/24)
4. Conducted Session on Active Student engagement in Virtual Environment in FDP Oragnized by MMTTC, Kurukshetra University(20/12/24)
5. Delivered Invited Talk on "Early identification of dysgraphia using Deep Learning Techniques" in 5th International Conference on Soft Computing and its Engineering applications, December 7-9,2023
6. Delivered invited talk in "Project Based Learning for Engineering Students" to faculties of all streams at Sanjay Ghodawat University, Kolhapur (5/10/24)
7. Regularly conducting session on ICT for Research at HRDC, Vallabh Vidhyanagar (22/09/24, 23/09/24, 19/04/24,11/10/24)
8. Resource person for Faculty Development Program (FDP) on "Advancements in Generative AI: Cutting-edge Techniques and Models, Organized by Amity University, Rajasthan, sponsored by SERB, September 25-29, 2023, Delivered session on Generative AI for Social Good and Sustainability
9. Sonal Jain, Delivered Sessions (Online) on Preprocessing for Machine Learning in Online Short-Term Training Program on Machine Learning, 9th to 12th February 2022 organized by GLS University, Ahmedabad
10. Visited Amsterdam University of Applied Sciences (With all Expenses covered by the invitee) and delivered session on Sorting and Searching-Graph Theory, Lab Session of Sorting and Searching (graph algorithms using Python), Artificial Intelligence in Games in Executive Batch evening Programme at HvA, interacted with students of the project Enterprise Web Applications, 25-31 December, 2019.
11. Conducted 3 Days Training on "Teaching Computer Science Effectively" to Computer Science School Teachers (42) of Maheshwari Public School, Jaipur, May 16-23, 2018..
12. Conducted Sessions for PhD Scholars of Faculty of J. Seyle University, Faculty of Economics, in Komarno, Slovakia from June 21, 2017 to June 26, 2017 on "The New Developments in Information Science-Asian Perspective".

13. Co-ordinated Session in 5th Chapter Convention of Quality Circle Forum of India, Delhi Chapter, Sub-Chapter Jaipur on Quality Concepts with theme Creating Value to the Society held on August 26, 2017 at JK Lakshmipat University, Jaipur.
14. Convened Faculty Development Programme on "Computational Techniques & Tools for Research" organized by Department of Computer Science Engineering, JKLU in association with Michigan Technological University and Soft Computing Research Society, October 6-8, 2016 at JK Lakshmipat University, Jaipur.
15. Conducted Sessions on "Working with Moodle" in Refresher course on ICT Skills for Associate Professors and Professors organized by Academic Staff College, Gujarat University, 17th March, 2012
16. Conducted Seminar for Legal Professionals on "Usages of pdf/ppt files in legal profession", January 21, 2012.
17. Conducted One day workshop for Faculty of Gujarat State on "How to Prepare for NET/GSET examination" at Dr. Thakorbbhai Patel Girls College, Baroda, 17th July 2011.
18. Conducted Orientation programme on (Computer basics and MS Office) for principals/directors of twenty Academic institutions of Gujarat Law Society, May 2005.
19. Conducted State level one day Train the Trainer workshop on "Statistical Computing using MS Excel, Calc and SPSS", August 2010.
20. Regularly conducting sessions on MS Office/Open Office/e-learning for lecturers of various colleges/universities in Orientation/Refresher program conducted by Gujarat University.
21. Regularly conducting sessions on "Using Moodle in education" for faculty of Gujarat State.

Seminar(s)/Conference(s)/Workshop(s) attended:

1. Training Programme on E-Content Development and Video Production for MOOCs, Conducted by NITTTR, Bhopal at Sardar Patel University, at Sardar Patel University, Gujarat
2. FDP on Nurturing Future Leadership Programme (NFLP) on Advancing Women Leaders in Higher Education scheduled during June 16-20, 2025 at IRMA School, Anand, Gujarat.
3. FDP on OpenCV for Image and Video Processing Applications, conducted by NITTTR Chandigarh, 22/07/2024 to 26/07/2024
4. FDP on AI and Cloud based Tools for Research, conducted by NITTTR Chandigarh, 24/03/2025 to 28/03/2025
5. Attended UGC Sponsored Short Term Course on MOOCs & e-Content Development from 12-09-2022 to 18-09-2022.
6. Course on AI for Information Retrieval and Extraction from May 9-13, 2022, Conducted by MNIT Jaipur, GIAN

7. Attended One Week Short Term Course on "Advances in Deep Architectures for Signal, Image & Vision Applications (ADASIVA) from 6th-10th December, 2021 Organized by Computer Vision and Biometrics Lab, Department of IT, IIIT Allahbad
8. SCRS International Expert Lecture Series - International FDP on Nature Inspired Algorithms-II organized by Soft Computing Research Society, New Delhi from August 05, 2020 to August 09, 2020
9. One week STTP on Artificial Intelligence in Health Care organized by Department of Electronics and Communication Engineering, Kumaraguru College of Technology, Coimbatore, July 16-22, 2020
10. Seven day Online International Faculty Development Programme on Mathematical Modelling for Data Analytics and Engineering organized by Department of Science and Humanities (Mathematics), Kumaraguru College of Technology, Coimbatore, June 29 to July 5, 2020
11. Workshop on "Project Based Learning" conducted by Prof. Siddharthan Goswamy conducted at JK Lakshmipat University, Jaipur on April 6-8, 2018
12. Attended Training on Basic Module of SAP (5 days) and ABAP Programing of SAP (15 days) conducted at JK Lakshmipat University
13. Teacher Training Workshop on "E-learning: Challenges and Opportunities" on 19 April, 2017 on 19 April 2017 at HCM Rajasthan State Institute of Public Administration, Jaipur
14. Participated in "Four days CE Enablement Programme on Advances in CAMS (Cloud, Analytics, Mobile and Security)" conducted by IBM at Department of Computer Science Engineering, August 30 - September 3, 2016.
15. Participated in AICTE recognized Short Term Course on "Wireless Networks through ICT" sponsored by NITTR Chandigarh (MHRD, Govt. of India) and conducted by Computer Science & Engineering Department since Nov 2-6, 2015, at JK Lakshmipat University, Jaipur, Raj.
16. Attended workshop on Cloud Computing and Big Data Convergence (C2BDC) from 23rd-25th February, 2015 organized by Department of Computer Science Engineering and Information Technology, SCIT, Manipal University, Jaipur with EMC2.
17. Attended JKLUCOM 2013: Conference on Management held from February 22-23, 2013 at JK Lakshmipat University, Jaipur.
18. Attended One day Design Workshop on "Swami Vivekananda Contributor Personality Development Programme" Organized by Gujarat Technological University, Ahmedabad, 30th June 2012 at Ahmedabad Management Association, Ahmedabad.
19. Attended Faculty Development Programme on "Swami Vivekananda Contributor Personality Development Programme" Organized by Gujarat Technological University,

Ahmedabad, 10th March at Ahmedabad Management Association, Ahmedabad.

20. Attended Faculty Development Programme on "Swami Vivekananda Contributor Personality Development Programme" Organized by Gujarat Technological University, Ahmedabad, 23-24 December 2011 Ahmedabad Management Association, Ahmedabad.
21. Participated in 46th CSI Annual National Convention hosted by Ahmedabad Chapter, 1-3 December 2011
22. Short Term Course on "Leveraging Technology for Effective e-teaching in the Classroom & Beyond" conducted by IIIT, Bangalore Supported by the Department of Information Technology, Government of India (1st March-25th June 2010).
23. Summer school on Natural Language processing and Text Mining conducted by Department of Computer Science Engineering, IIT Kharagpur (24th June, 2008- 29th June 2008) – 6 days
24. Faculty Development Program conducted by ICFAI University, December 2007 at Ahmedabad- 1 day.
25. Refresher course in IT (19th Nov – 9th Dec, 2007) conducted by Academic Staff College, Gujarat University.- 21 days
26. One Day Workshop on Application of Knowledge Management in the Knowledge Economy held at Institute of Management, Nirma University of Science and Technology, Ahmedabad on February 17, 2007.
27. Workshop on Linux Networking and System Administration conducted by REDHAT (Jan 26-28, 2007) – 3 days
28. Intensive workshop on Service-oriented computing conducted by IEEE Gujarat section held at DAIICT, Gandhinagar, (Dec 16-17, 2006)- 3 days
29. Seminar on Convergence of Computer and Communication Technology (Mar 13-14, 2004)- 2 days.
30. Workshop on teaching cluster computing conducted by IEEE Gujarat section (Dec 18-21, 2001)- 3 days.

Achievements and Awards:

- Best Paper Award for Improved Sampling algorithm through a modified oversampling approach based on Spectral Clustering and SMOTE, Computing, Communication and Sensor Network, organized by Applied Computer Technology, Kolkatta in association with International Association of Science, Technology and Management, October 2-4, 2021 (Online Mode)
- Student Choice Award on Teacher's day, 2018 by Students of JK Lakshmipat University Jaipur
- Best Paper Award for A Survey of User's Perception Concerning e-waste Management

Presented at 6th International Conference on "Green, Growth, Globalization, Governance and GST: Challenges and Opportunities, February 2-4, 2018, Jaipur

- Young Scientist Award for Initiatives Discoveries, and Developments in the discipline of Information Retrieval by Venus International Foundation, Chennai, December 2016
- Vaigyanik Drashtikon Award at 4th Rajasthan Science Congress for Paper "Recommendation System for Diseases in Kids" presented in 4th Rajasthan Science Congress held at JK Lakshmipat University, Jaipur, October 16-18, 2016, Co-authors of Paper: Ankit Nahata, Rohan Dosi, students of JKLU and Tripti Dodiya, Faculty, GLS University, Ahmedabad.
- Felicitated by Lions Club on Teacher's Day
- Achievement Badge in the *Pattern Discovery in Data Mining* course offered by the University of Illinois at Urbana-Champaign.
- Won Cash prize for paper "e-portfolio a valuable tool connecting faculty employer and students" the paper was adjudged as third best-presented paper at E-biz summit national seminar and paper presentation contest organized by SEMCOM (Charotar Vidya Mandal)
- Represented DAVV in State Inter-university Youth Festival for event One Act play and won second prize
- Gold Medal in 12th Standard

Membership/ Association with professional bodies:

- Have been associated as Journal Reviewer with various journals of International and National repute
- Member of International Association of Computer Science and Information Technology, Singapore
- Life member, Computer Society of India, Worked as a Managing committee member of Computer Society of India, Ahmedabad chapter (2005)
- Member, Association for Computing Machinery Advancing Computing as a Science & Profession
- Life Member, Vigyan Bharti, Rajasthan
- Life Member, Indian Society of Training and Development



Dr Sonal Amit Jain