

Faculty Profile

Name	:Dr.Kavita Sheoran
Designation	: Associate Professor
Qualifications	: Ph.D. ,MTech,B.E.
Phone	: 011-45037193
Email	: Kavita.sheoran@msit.in
Area of Interest/Specialization	:Soft Computing, Software Engineering, Algorithm Design and Analysis, Database Management System
Experience	: 20+ years



Key Publications

1. H. P. Singh, G. Dubey, **K. Sheoran**, G. Dhand, and A. Singh, "Socially enhanced graph network for early identification of at-risk students in virtual learning environments," *User Modeling and User-Adapted Interaction*, vol. 36, no. 5, pp. 1–42, Feb. 2026. **[IF:4.5] (SCI)**.
2. Geetika Dhand, Meena Rao, Parul Chaudhary, **Kavita Sheoran**, A secure routing and malicious node detection in mobile Ad hoc network using trust value evaluation with improved XGBoost mechanism, "Journal of Network and Computer Applications", Volume 235, 2025, ISSN 1084-8045 **[IF:7.7] (SCI)**.
3. H. L. Majeed, O. A. Hassen, D. A. Farhan, Y. Y. Gromov, **K. Sheoran** and G. Dhand, "Computer Vision of Smile Detection Based on Machine and Deep Learning Approach", *Journal of Cybersecurity and Information Management*, vol. 16, no. 1, pp. 208-230, Mar 2025(**Scopus**).
4. G. Dubey, H. P. Singh, R. K. Maurya, **K. Sheoran** and G. Dhand, "A hybrid forecasting system using convolutional-based extreme learning with extended elephant herd optimization for time-series prediction", *soft computing*, vol. 28, pp. 7093-7124, 2024**[IF:4.1](SCI)**.
5. S. Malik, G. Dhand, **K. Sheoran**, D. Jatain and V. Garg, "Tri-factorized Modular Hypergraph Autoencoder for Multimodal Semantic Analysis", *SN Computer Science*, vol. 5, no. 867, pp. 1-12, Sep 2024 (**Scopus**)
6. Anupama Kaushik, **Kavita Sheoran**, Bhavesh Singh, Harsh sharma, Ritvik Kapur, Nikhil Bhutani ,SENSE: software effort estimation using novel stacking ensemble learning. *Innovations Syst Softw Eng* 21, 769–785, 2025(**Scopus**)
7. **Kavita Sheoran** , Arpit Bajgoti, Rishik Gupta , Nishtha Jatana, Geetika Dhand,C. Gupta, P. Dadheech , U. Yahyaand, N. Aneja, "Pronunciation Scoring With Goodness of Pronunciation and Dynamic Time Warping". *IEEE Access*, vol 11, pp.15485-15495, 2023**[Impact factor 3.4]**
8. Gaurav Dubey, Harivas Pratap Singh ,**Kavita Sheoran** , Geetika Dhand , Pooja Malik ,Drug review sentimental analysis based on modular lexicon generation and a fusion of bidirectional threshold weighted mapping CNN-RNN. *Concurrency Computation PracticeExperience*.vol. 35(3) , 2023; doi:10.1002/cpe.7512 **[Impact factor 1.83]**

9. S. Singhal, Nishtha Jatana, **Kavita Sheoran**, Geetika Dhand, Shaily Malik, R. Gupta, B. Suri, M. Niranjana Murthy, S. N. Mohanty and N. R. Pradhan, "Multi-Objective Fault-Coverage Based Regression Test Selection and Prioritization Using Enhanced ACO_TCSP", *Mathematics*, vol. 11, no. 13, pp. 1-21, Jul 2023 [**Impact factor 2.4**]
10. A. Aggarwal, Nikhil Bhutani, . Ritvik Kapur, Geetika Dhand and **Kavita Sheoran**, "Real-time hand gesture recognition using multiple deep learning architectures", *Signal, Image and Video Processing*, Jul 2023 [**Impact factor 2.3**]
11. R. Jain, Geetika Dhand, **Kavita Sheoran**, Shaily Malik and Nishtha Jatana, "Blockchain based Certificate Validation", *Fusion: Practice and Applications*, vol. 12, no. 2, pp. 42-53, Jun 2023
12. S.Singhal , Nishtha Jatana , Geetika Dhand, Shaily Malik , **Kavita Sheoran** , "Empirical Evaluation of Tetrad Optimization Methods for Test Case Selection and Prioritization", *Indian Journal of Science and Technology* 16(14): 1038-1044, 2023
13. Geetika Dhand, **Kavita Sheoran**, Parul Agarwal, and Siddhartha Sankar Biswas. "Deep enriched salp swarm optimization based bidirectional-long short-term memory model for healthcare monitoring system in big data." *Informatics in Medicine Unlocked* 32 (2022): 101010,
14. **Kavita Sheoran**, Geetika Dhand, Mayank Dabas, Nishthavan Dahiya and Pratish Pushparaj, "Solving Connect 4 Using Optimized Minimax And Monte Carlo Tree Search", *Advances and Applications in Mathematical Sciences* Volume 21, Issue 6, Pages 3303-3313, April 2022.
15. Geetika Dhand and **Kavita Sheoran**, "Protocols SMEER (Secure Multitier Energy Efficient Routing Protocol) and SCOR (Secure Elliptic curve based Chaotic key Galois Cryptography on Opportunistic Routing)", *Materials Today: Proceedings*, Vol.37, pp. 1324-1327, 2021
16. **K. Sheoran**, P. Tomar, R. Mishra, "A novel quality prediction model for component-based software system using ACO–NM optimized extreme learning machine", *Cognitive Neurodynamic* vol. 14(4), pp:502-522, 2020(SCIE).
17. . Tomar, R. Mishra, **K. Sheoran**, "Prediction of quality using ANN based on Teaching learning optimization in Component based software systems", *Software Practice and Experience*. vol. 48, no. 4, pp. 896-910, 2018(SCIE)
18. G. Dhand and **K. Sheoran**, "Protocols SMEER (Secure Multitier Energy Efficient Routing Protocol) and SCOR (Secure Elliptic curve based Chaotic key Galois Cryptography on Opportunistic Routing)", *Materials Today: Proceedings*, Vol.37, pp. 1324-1327, 2021, (**Scopus**)
19. **K. Sheoran**, P. Tomar, R. Mishra, "Software Quality Prediction using Hybrid Classifier based on Improved PSO and ANN", *Journal of Advanced Research in Dynamical and Control Systems* vol. 9, pp.3016-3029, 2017(Scopus).
20. **K. Sheoran**, P. Tomar, R. Mishra, "Software Quality Prediction Model with the Aid of Advanced Neural Network with HCS", *Procedia Computer Science*, 92, pp.418-424, 2016 (Scopus).
21. Geetika Dhand and **Kavita Sheoran**, "Evaluate AODV to DSR and Improving AODV", *Journal of University of Shanghai for Science and Technology*, Volume 23(1), pp 247-252 ,Jan 2021

22. Parul Agarwal, Geetika Dhand, Ahmed J. Obaid, **Kavita Sheoran** "Smart Irrigation with Machine Learning Based Decision Support System", *IJMA*, vol. 10, no. 2, pp. 4003 - 4013, May 2021.
23. Geetika Dhand and **Kavita Sheoran**, "Ad-Hoc on Android using Wi-Fi Direct", *International Journal of Engineering and Advanced Technology*, 9(6), 41-44, Aug 20.
24. **Kavita Sheoran**, "Literacy Rate Analysis", *International Journal of Scientific & Technology Research*, vol. 8 (08), pp. 1306-1312, 2019.
25. **Kavita Sheoran**, "Windows System Malware Detections", *International Journal of Management, Technology and Engineering*, vol. 9 (07), pp. 468-474, 2019.
26. **K. Sheoran**, O. P. Sangwan, "Enhancing the Attributes of Software Quality of Component Based Software Using Soft Computing Techniques", *ELK Asia Pacific Journal of Computer Science and Information Systems*, vol. 1, no. 2, 2015.
27. **Kavita Sheoran**, "Implementing and Comparing DSR and DSDV Routing Protocols of Mobile Ad-Hoc Networks using NS2 Simulator", *International Journal of Computer Applications* 92(6):18-24, April 2014 16013-4990, ISBN : 973-93-80881-26-7
28. **Kavita Sheoran**, "Intelligent Transportation System Architecture for a Carpool System". *International Journal of Computer Applications* 92(2):22-25, April 2014. 15981-4894 ISBN : 973-93-80881-22-4

Papers presented in Conferences

1. Harshal, H. Sanga, G. Dhand, **K. Sheoran**, N. Jatana, S. Malik, and D. Jatain, "Reinforcement learning-based optimal page replacement policy," presented at the 1st Int. Conf. on Advances, Architectures, Algorithms and Applications for AI (IC4AI'26), VIT-AP University, India, Jul. 17–18, 2026.
2. S. Malik, **K. Sheoran**, N. Jatana, V. Garg, G. Dhand, and Divya, "Comparative analysis of object detection models for image captioning," in *Proc. 3rd Int. Conf. Artificial Intelligence and Sustainable Computing for Smart Cities (AIS2C2)*, Greater Noida, India, Dec. 2025
3. Rishik Gupta, Geetika Dhand, and **Kavita Sheoran**, "Integrated smart attendance tracker using YOLOv8 and FaceNet with Spotify ANNOY," in *Proceedings of the 4th International Conference on ICT for Digital, Smart, and Sustainable Development (ICIDSSD 2024)*, **Springer**, 2024.
4. S. Malik, K. Sheoran and G. Dhand, "A System for Providing Insights on a Tourist Spot based on Text Mining". 4th International Conference on Innovative Computing & Communication (ICICC) 2021.
5. Eeshwaran, Tanya Mittal and Kavita Sheoran, "Serverless computation with nuLambda", 4th International Conference on Innovative Computing & Communication (ICICC) 2021.
6. Maryada, Kirti, Kavita Sheoran and Manvi Gupta, "DevSecOps- A Boon to IT Industry", 4th International Conference on Innovative Computing & Communication (ICICC) 2021.
7. Kavita Sheoran, Shivank Awasthi, Ishtdeep Singh Malhi, Devvrat Tyagi, Shubham Goel, "Introduction to SIDS Neural Network in Game", 8th International Conference on Cloud Computing, Data Science and Engineering, IEEE Confluence 2018, January 2018.
8. K. Sheoran, K. Agarwal, A. Gulati "Quality Model for component based E-Commerce application", 3rd International Conference on Computing for Sustainable Global, IEEE Conference 2016.

9. Kavita Sheoran,"Component based quality prediction via Component Reliability using optimal fuzzy classifier and evolutionary algorithm."CSI 2015 50th Golden Jubilee Annual Convention on "Digital Life" at BVICAM, New Delhi on 2nd-5th Dec., 2015.
10. Kavita Sheoran,"Component based quality prediction via Component Reliability using optimal fuzzy classifier and evolutionary algorithm."CSI 2015 50th Golden Jubilee Annual Convention on "Digital Life" at BVICAM, New Delhi on 2nd-5th Dec., 2015
11. Kavita Sheoran, 'Secure Compression in Images' ,National Conference on recent Trends in information technology – Computer society of india G.E.C ,Gwalior- 12th -13th april 2008.
12. Kavita Sheoran,'Secure Compression in Images', 2nd National conference on computing for nation development at Bhartiya Vidyapeeth College of Engineering,Delhi-08-09 February,2008
13. Kavita Sheoran'Image process and its application', National Conference on issues and challenges in internet and mobile computing at IMR,Gaziabad 28th March,2008
14. Kavita Sheoran, 'Data hiding in Digital Images'. 40th Annual Convention of operational Research Society of indiaORSI(04-06 December,2007

Patent/Copyright

1. Mr.Simerneet Singh, Dr.Nishtha Jatana, Dr.Kavita Sheoran, Dr.Geetika Dhand, Mr.Vasu Goel published a patent titled , "Communication Assistance System and Method of operating the system",Patent filed on 15/04/2021 published on 23/04/2021, Application/Patent No: 202111017478, granted on 22/4/25 ,Grant No: 565368, granted for India
2. Simerneet Singh ,Gurmeet Kaur, Dr.NishthaJatana, **Dr.KavitaSheoran**, Dr.Geetika Dhand,Dr.ShailyMalik, Dr.Divya, Ms.Vaani Garg, Dr.AnjuDhillon,Ms. Priyanka Dhaka, Ms.Neha Mathur and Mr.Aabhaas Sikka , published a patent titled Compact Electronic Single Braille cell display device(patent filed on 6/02/2023 ,published 10/02/23, application no 202311007354A) **granted** on 10 Aug 2023, Grant No.: 444157, granted for India
3. Dr.Prabhjot Kaur , Dr.Anupama Kaushik,Ms Shivani Chauhan,Mr.Ayush Das,**Dr.Kavita Sheoran**, Dr.Geetika Dhand, published a patent titled IOT based E-Challan System for Real Time face mask Detection for transport enforcement(patent filed on 16/05/2022 ,published 20/05/2022,application no 202211028015)
4. Dr. Gaurav Dubey,Mr. Harivans Pratap Singh,Dr. Charu Agarwal,Dr. Vikas Yadav,**Dr. Kavita Sheoran**,Dr. Prabhjot Kaur Sidhu,Dr. Geetika Dhand,Dr. Anupama Kaushik and Ms. Shaily Malik published a patent titled "IOT Based Smart Shoesfor Child Health Monitoring",Patent filed on 20/3/2021,Published on 26/03/2021,Patent No.202111011966A
5. Mr. Harivans Pratap singh,Dr.. Gaurav Dubey,Dr. Anil Kumar Dubey,Dr. **Kavita Sheoran** Dr. Prabhjot Kaur Sidhu,Dr. Geetika Dhand,Dr. Anupama Kaushik,Ms. Geetanjali Sharma published a patent titled , "Methodelectronic device for monitoring user in work site" ,patent filed on 20/3/2021,published on 26/03/2021,patent No.202111011965

6. Mr. Harivans Pratap singh, Dr. Gaurav Dubey, Dr. Akash Punhani, Dr. Anupama Kaushik, Dr. Prabhjot Kaur Sidhu, Dr. Geetika Dhand, **Dr. Kavita Sheoran**, Dr. Nishtha Jatana published a patent titled "Method and electronic device for personalizing user activity in virtual reality environment", Patent filed on 20/3/2021, Published on 26/03/2021, Patent No. 202111011967.
7. Parul Aggarwal, M Afshar, Sherin, Geetika Dhand, Amita Yadav, **Kavita Sheoran**, Sonia Rathee, Tabish Mufti, Faraz Doja, Siddhartha Sankar published a patent titled "Cartoonify Image Detection Using Machine learning", Patent filed on 6/04/2021, Published on 30/04/21, Granted on 5/05/2021, Patent No. 2021101766
8. Dr. Prabhjot Kaur Sidhu, Mr. Ronish, Dr. Anupama Kaushik, Dr. Puneet Azad, **Dr. Kavita Sheoran**, Dr. Kamaljit Singh Saini, Dr. Krishan Pal Chaudhary, published a patent titled "IoT based smart complaint box", Patent filed on 15/01/2021; Published on 22/01/2021, Patent No. 202111001925.

Important FDP attended.

1. 8 weeks AICTE approved Massive Open Online Courses (MOOCs) on "Design Technology and innovation" (Jan-Mar 2023).
2. 1 month FOSS Cell, FDP on NLP training (7 Nov 2022 to 14 Dec 2022).
3. 8-weeks AICTE approved Massive Open Online Courses (MOOCs) on "Data Base Management System" (Jan-March 2022).
4. 1-week AICTE_ATAL FDP on Internet of Things (IoT)- A Practical Approach (6.12.2021-15.12.2021).
5. 2-weeks Industrial Training conducted by Brain Mentor on "Data Science" (15.11.2021-26.11.2021).
6. 1 month FOSS Cell, FDP on AI/ML Python Training (27 September 2021 to 11 November 2021)
7. 4-weeks AICTE approved Massive Open Online Courses (MOOCs) on "Python for data science" (Jul-Aug'21).
8. 1 month MOE innovation cell and AICTE training program on Innovation Ambassador training (Advanced level) (30 June 2021 -30 July 2021)
9. 1-week AICTE Refresher Programme on "Use of ICT in Engineering Education" (24.2.2021-2.3.2021).

Awards /Recognitions and Achievements

- Awarded with **Excellence in Research** for the year 2024 and 2025 during Annual Day of MSIT Feb 14, 2026 in recognition for an outstanding contribution to the quality of research.
- Awarded with **Best Faculty** for the year 2023 during Annual Day of MSIT Feb 3, 2024 in recognition for outstanding contribution to the institution in academic, research & publications and co-curricular activities.
- Awarded with **Excellence in Research** for the year 2023 during Annual Day of MSIT Feb 3, 2024 in recognition for an outstanding contribution to the quality of research.
- Recognized as Innovation Ambassador by MHRD
- AICTE certified Mentor for inductee teachers.

- Received Letter of Appreciation for sharing the valuable knowledge on “Introduction of Fuzzy & its applications” under aegis of the Five-day Lecture series from 18 to 22 Dec 2017 held at MSIT, New Delhi.
- Editor “Data Wrangling: Concepts, Applications and Tools”, John Wiley & Sons, July 2023 ISBN: 9781119879688.
- **Best Mentorship Award:** is given by Guru Gobind Singh Indraprastha University for year 2016 and 2020 in Inter college project Competition.
- **Best Faculty in CSE Award:** is given by MSIT for year 2014-2015.

Book Chapter/Books published

1. Kavita Sheoran “Secure Compression In Images”, **Lambert Academic Publishing**, ISBN 9783659591204, Aug 2019
2. Mool Chand Sharma, Kavita Sheoran, “**Foundation of Computer Science**”, S.K. Kataria & Sons, ISBN 9789383992195, 2016
3. Niranjana Murthy, M., **Kavita Sheoran**, Geetika Dhand, & Prabhjot Kaur, Data Wrangling: Concepts, Applications and Tools. John Wiley & Sons, July 2023 ISBN: 9781119879688. (Scopus Indexed)

Memberships of Professional bodies:

- Registered as a Life Time Member (LM-108179) with Indian Society of Technical Education (I.S.T.E) NEW DELHI.
- CSI (Computer Society of India) Membership No: 01503658

Other Contribution:

- As **Technical coordinator**, received a grant of ₹18,00,000 from Petronet LNG Ltd., Delhi, in March 2026 for the upgradation of the Centre of Excellence in Computational Intelligence (CI) and Machine Learning (ML) Lab at MSIT.
- As **Technical coordinator**, received a grant of ₹30 lakh from Petronet LNG Ltd. for establishing the Centre of Excellence in Computational Intelligence and Machine Learning lab at MSIT in March 2025.
- Nodal officer of FIT INDIA MOMENT, 2021
- Coordinator of UNNAT BHARAT ABHIYAN, 2021
- Member college Placement Team, 2021
- Member Grievance Cell, 2021
- Publicity committee Coordinator in ICAIA 2020 (The International Conference on Artificial Intelligence and Applications) organized by MSIT
- Innovation activity committee member under Innovation cell (From Aug 2019 to till date).
- Member of Alumni Committee from Aug 2017 to July 2019.
- Coordinator NSS Cell, 2018
- Co convenor in technical fest Avensis 2018.
- HOD(CSE) from Aug 2015-July 2016

- Participated as **Session Chair** in the 4th International conference on Innovative computing and communication (ICICC-2021) organized by Shaheed Sukhdev College of business studies, University of Delhi, in association with National Institute of Technology Patna and University of Valladolid, Spain on 20th -21st Feb 2021
- Participated in International conference on Computational Research and Data Analytics (ICCRDA) 2020, as **Session Chair** held on 24 October 2020.
- Participated in International Conference on Emerging Technologies in Data Mining and Information Security (IEMIS) 2020, as **Session Chair** held on 2-4 July 2020.
- Participated in the International Conference on Innovative Computing and Communication (ICICC-2020), as **Session chair** held on Feb 21-23, 2020.