Faculty Profile

Name	Dr. Varun Gupta	
Designation	Professor	
Pay Scale	Level-14	
Department	Computer Science and Engineering	
Qualification	Ph.D., M.E, B.Tech.	

Date of joining	Institute 22/7/2015	Present Post 22/7/2018

Experience *(in years)*	Total 21.5	Teaching 13.5	Industry 8

Research Interests	Machine learning, Deep learning, and Generative AI		
Contact Details:	Email varungupta@ccet.ac.in	Mobile/Phone 9646047091	

Research Publications	International Journals	National Journals	International Conferences	National Conferences
	33 (SCI-18)	0	10	0

Books/Chapters Published	04			
Research Guidance	Ph. D.	06	Masters	2
Research Projects	Completed	Nil	In progress	
Consultancy Projects	Completed	Nil	In progress	
Seminar/Conference/STTPs	Attended	10	Organized	02

Professional Affiliations	-
Awards/ Fellowships etc.	-
List of Publications	Attached
Research Project Detail	Nil
Patent Detail	Patents Granted-3, Patents Published-2
Consultancy	Nil
Ph.D Scholars Names	1. Praveen Kumar (completed), Ongoing:- 2. Ekta Gupta, 3. Deepika Aggarwal, 4. Balvir, 5. Monica, 6. Kulvinder Singh
Institute Responsibility	1. Head Applied Sciences Dept 2. Prof Incharge Institute Publication Cell 3. Professor Incharge Admissions 2023
Department Responsibility	1. Member Training and Placement Advisory Committee 2. NBA committee member
Any Other Information	

Signature of faculty

International Journals

1. Margin-aware optimized contrastive learning for enhanced self-supervised histopathological image classification. Health Information Science and Systems 2024 Nov 29;13(1):2. doi: 10.1007/s13755-024-00316-4 [Impact Factor-5.4]

2. Preserving Artistic Heritage: A Comprehensive Review of Virtual Restoration Methods for Damaged Artworks. Archives of Computational Methods in Engineering (Springer) (2024). SCI Journal. https://doi.org/10.1007/s11831-024-10175-7 - [Impact Factor-9.9]

3. Dual attention and channel transformer-based generative adversarial network for restoration of the damaged artwork. Engineering Applications of Artificial Intelligence (Elsevier). SCI Journal. https://doi.org/10.1016/j.engappai.2023.107457- [Impact Factor-7.5]

4. Restoration of Damaged Artworks based on a Generative Adversarial Network., Multimedia Tools and Applications (Springer), 2023. SCI Journal. DOI: 10.1007/s11042-023-15222-2 [Impact Factor-3.0]

5. Punjabi news multi-classification using language generation-based optimized long short-term memory networks. Evolving Systems (Springer), 2022. SCI Journal. https://doi.org/10.1007/s12530-022-09428-2 [Impact Factor-2.8]

6. Modified residual networks for severity stage classification of diabetic retinopathy. Evolving Systems (Springer), 2022. SCI Journal. https://doi.org/10.1007/s12530-022-09427-3 [Impact Factor-2.8]

7. Breast cancer detection from histopathology images using modified residual neural networks, Biocybernetics and Biomedical Engineering (Elsevier), 2021. SCI Journal. DOI: 10.1016/j.bbe.2021.08.011 [Impact Factor-5.3]

8. Modified dense convolutional networks based emotion detection from speech using its paralinguistic features, Multimedia Tools and Applications (Springer), 2021. SCI Journal. DOI: 10.1007/s11042-021-11210-6 [Impact Factor-3.0]

9. Restoration of artwork using deep neural networks, Evolving Systems (Springer), 2021. SCI Journal. DOI: 10.1007/s12530-019-09303-7 [Impact Factor-2.8]

10. Aggregated residual transformation network for multistage classification in diabetic retinopathy, International Journal of Imaging Systems and Technology (Wiley), 2021. SCI Journal. DOI: 10.1002/ima.22513 [Impact Factor-3.0]

11. Power Theft Detection Using Deep Neural Networks, Electric Power Components and Systems (Taylor and Francis), 2021. SCI Journal. DOI: 10.1080/15325008.2021.1970055 [Impact Factor-1.9]

12. Detection and localization of potholes in thermal images using deep neural networks, Multimedia Tools and Applications (Springer), 2020. SCI Journal. DOI: 10.1007/s11042-020-09293-8 [Impact Factor-3.0]

13. Modified U-Net architecture for semantic segmentation of diabetic retinopathy images, Biocybernetics and Biomedical Engineering (Elsevier), 2020. SCI Journal. DOI: 10.1016/J.BBE.2020.05.006 [Impact Factor-5.3]

14. An Efficient Language-Independent Acoustic Emotion Classification System, Arabian Journal for Science and Engineering (Springer), 2019. SCI Journal. DOI: 10.1007/s13369-019-04293-9 [Impact Factor-2.6]

15. Convolutional neural networks-based potholes detection using thermal imaging, Journal of King Saud University - Computer and Information Sciences (Elsevier), 2019. SCI Journal. DOI: 10.1016/j.jksuci.2019.02.004 [Impact Factor-5.2]

16. Dynamic cohesion measures for object-oriented software, Journal of Systems Architecture (Elsevier), 2011. SCI Journal. DOI: 10.1016/j.sysarc.2010.05.008 [Impact Factor-3.0]

17. A Survey of Dynamic Software Metrics, Journal of Computer Science and Technology (Springer), 2010. SCI Journal. DOI: 10.1007/s11390-010-9384-3 [Impact Factor-1.7]

18. Package Coupling Measurement in Object-Oriented Software, Journal of Computer Science and Technology (Springer), 2009. SCI Journal. DOI: 10.1007/s11390-009-9223-6 [Impact Factor-1.7]

19. Package level cohesion measurement in object-oriented software, Journal of the Brazilian Computer Society (Springer), 2012. DOI: 10.1007/s13173-011-0052-4

20. Validation of dynamic coupling metrics for object-oriented software, ACM SIGSOFT Software Engineering Notes, 2011. DOI: 10.1145/2020976.2020985

21. Evaluation of object-oriented spatial complexity measures, ACM SIGSOFT Software Engineering Notes, 2009. DOI: 10.1145/1527202.1527208

22. A Novel Approach for Dynamic Coupling Measurement in Object-Oriented Software, Software Quality Professional (American Society for Quality), vol. 13(3), pp. 16-23, June 2011.

23. Identifying Malaria Infection in Red Blood Cells using Optimized Step-Increase Convolutional Neural Network Model, International Journal of Innovative Technology and Exploring Engineering, 2278-3075, Vol.8 (9S), July 2019

24. Stock Price Trend Prediction with Long Short-Term Memory Neural Networks, International Journal of Computational Intelligence Studies, Vol. 8, No. 4, 2019

25. Prediction of air pollution using LSTM based recurrent neural networks, International Journal of Computational Intelligence Studies, Vol. 8, No. 4, 2019.

26. Image style transfer using convolutional neural networks based on transfer learning, International Journal of Computational Systems Engineering, Vol. 5, No. 1, 2019.

27. Airlines Passenger Forecasting Using LSTM based Recurrent Neural Networks, International Journal "Information Theories and Applications", Vol. 26, No. 2, 178-187, 2019.

28. Crude Oil Price Prediction Using LSTM Networks, International Journal of Computer and Information Engineering (WASET) Vol.12, No. 3, 217-221, 2018.

29. Prediction of Gold Prices Using LSTM-Based Recurrent Neural Networks, International Journal of Data Mining and Emerging Technologies, Volume 8, Number 2, November, 2018, pp. 143-149.

30. Age and Gender Estimation from Face Images Using CNN-Based Wide Residual Networks, International Journal of Applied Research Technology and Computing, Vol. 9, No. 1, 102-112, 2018. DOI: 10.5958/0975-8089.2018.00011.8

31. Newsgroup Classification Using CNN and GloVe Embeddings, International Journal of Applied Research Technology and Computing, Vol. 9, No. 2, May-August 2018. DOI: 10.5958/0975-8089.2018.00013.1

32. Brain Tumor Detection using Artificial Neural Networks, International Journal of Computational Intelligence, Biotechnology and Biochemical Engineering, Vol 3 Issue 1, 2018.

33. Self-Harm Prevention based on Social Platforms User Data Using Naive Bayes Classifier, Journal of Data Mining and Management, Volume 3 Issue 2, 2018.

Patents

1. Method and System for Real-Time Detection and Repair Prioritization of Potholes, Patent Number 507539, 15-May-2023, The Patent Office, Government of India. (Patent Granted)
2. Colourization of Artwork using Generative Adversarial Networks, Patent No. 2021105926 dt 19-Aug-2021, Innovation Patent, IP Australia, Australian Government. (Patent Granted)
3. Restoration of Artwork using Generative Adversarial Networks, Patent No. 2021107048 dt 24-Aug-2021, Innovation Patent, IP Australia, Australian Government. (Patent Granted)
4. Method and System for Latent Fingerprint Recognition, Patent Application no. 202411075033, Date of filing of Application:04/10/2024, Publication Date: 18/10/2024, The Patent Office, Government of India. (Patent Published)
5. Method and System for Identifying Neurological Pattern and Prognostic Management, Patent Application No.202431051099, Date of filing of Application: 03/07/2024, Publication Date: 12/07/2024, The Patent Office, Government of India. (Patent Published)

Book Chapters

1. Kumar, P., Gupta, V. (2024). Unpaired Image-to-Image Translation Based Artwork Restoration Using Generative Adversarial Networks. In: Talpa Sai, P.H.V.S., Potnuru, S., Avcar, M., Ranjan Kar, V. (eds) Intelligent Manufacturing and Energy Sustainability. ICIMES 2023. Smart Innovation, Systems and Technologies, vol 372. Springer, Singapore. https://doi.org/10.1007/978-981-99-6774-2_52
2. An Efficient Model for Skin Disease Detection and Localization using Faster Region Convolutional Neural Network Inception, Responsible AI: Principles and Practices, Scrivener Publishing, Wiley. (Accepted for publication)
3. Ground water level classification using machine learning, Responsible AI: Principles and Practices, Scrivener Publishing, Wiley. (Accepted for publication).
4. Tyre condition Prediction using deep learning, Computational Optimization Techniques for Artificial Intelligence Enabled Environments, Springer Nature. (chapter proposal accepted)

Conferences (International)

1. Paper titled "Artwork restoration using paired image translation-based generative adversarial networks." presented in 2nd International Conference on Advances in Computing, Communication and Security (I3CS-2023), 01- 03 June 2023 NIT Kurukshetra; Vol. 01013, pp.1–12, 2023 ITM Web of Conferences 54, 01013 (2023) https://doi.org/10.1051/itmconf/20235401013

3. Domain Adaptable Self-Supervised Representation Learning on Remote Sensing Satellite Imagery, International Joint Conference on Neural Networks (IJCNN), 2023.

4. Learning Self-Supervised Representations for Label Efficient Cross-Domain Knowledge Transfer on Diabetic Retinopathy Fundus Images, International Joint Conference on Neural Networks (IJCNN), 2023.

5. Functional Knowledge Transfer with Self-supervised Representation Learning, IEEE International Conference on Image Processing (ICIP), 2023.

6. A review of Automatic Classification of Breast Cancer Using Supervised Learning Strategies, 4th International Conference on Information Systems and Computer Networks (ISCON), 2019.

7. A Novel Approach for Dynamic Coupling Measurement in Object-Oriented Software, Software Quality Professional (American Society for Quality), vol. 13(3), pp. 16-23, June 2011.

8. Evaluation of Code and Data Spatial Complexity Measures, Communications in Computer and Information Science (Springer), 2009. DOI: 10.1007/978-3-642-03547-0_57

9. Measurement of Dynamic Metrics using Dynamic Analysis of Programs, in Proceedings of the WSEAS Conference on Applied Computing Conference (ACC 2008), Istanbul, Turkey, May 27-30, 2008, pp. 81-86.

10. Towards Spatial Complexity Measures for Comprehension of Java programs, in Proceedings of the 14th International Conference on Advanced Computing & Communications (ADCOM 2006) IEEE Computer Society Press, 2006, pp. 430-433.