

## Profile Page



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Designation : Associate Professor

Department : Computer Science & Engg.

Qualification : Ph.D(Computer Science and Engineering) (NIT Jalandhar)  
M.TECH Computer Science and Engineering (Punjabi University, Patiala)  
B.TECH Computer Science and Engineering (Punjab Technical University, Jalandhar)

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### Research Interests :

Digital Image Processing, Machine and Deep Learning, Document and Scenic Image Analysis, Biometric , Medical Image Processing

### Journal Publications :

Year	Journal	Publication
2022	International Journal of Imaging Systems and Technology	Sachin Kumar,Sourabh Shastri,Shilpa Mahajan,Kuljeet Singh,Surbhi Gupta,Rajneesh Rani,Neeraj Mohan,Vibhakar Mansotra "LiteCovidNet: A lightweight deep neural network model for detection of COVID-19 using X-ray images"
2022	Multimedia Tools and Applications	Nonita Sharma, K. P. Sharma, Monika Mangla & Rajneesh Rani "Breast cancer classification using snapshot ensemble deep learning model and t-distributed stochastic neighbor embedding"
2022	International Journal of Image and Graphics Vol. 22, No. 03, 2140014 (2022)	Rishipal Singh, Rajneesh Rani, Aman Kamboj "An Optimized Approach for Intra-Class Fruit Classification Using Deep Convolutional Neural Network"
2022	International Journal of Image and Graphics Vol. 22, No. 03, 2140011 (2022)	Rajneesh Rani, Renu Dhir, Deepti Kakkar and Nonita Sharma "Script Identification for Printed and Handwritten Indian Documents: An Empirical Study of Different Feature Classifier Combinations"
2022	Transactions on Asian and Low-Resource Language Information Processing Volume 21, Issue 4	Shilpa Mahajan, Rajneesh Rani "Word Level Script Identification Using Convolutional Neural Network Enhancement for Scenic Images"
2022	(The Institution of Engineering and Technology)IET Image Processing Volume 16, Issue 4 p. 1096-1110	Gurjinder Kaur, Samayveer Singh, Rajneesh Rani, Rajeev Kumar, Aruna Malik "High?quality reversible data hiding scheme using sorting and enhanced pairwise PEE"

2022	International Journal of Electronic Security and Digital Forensics Vol. 14, Issue No. 5	Simranjot Kaur, Rajneesh Rani, Ritu Garg and Nonita Sharma "State-of-the-art techniques for passive image forgery detection: a brief review"
2022	Transactions on Asian and Low-Resource Language Information Processing	Nimratveer Kaur Bahia, Rajneesh Rani "Multi-level Taxonomy Review for Sign Language Recognition: Emphasis on Indian Sign Language"
2022	MISP: International Conference on Machine Intelligence and Signal Processing	Simranjot Kaur & Rajneesh Rani "Image Forgery Detection Using Multi-Layer Convolutional Neural Network"
2022	International Journal of Software Innovation (IJSI)	Rajandeep Kaur, Rajneesh Rani, Roop Pahuja "Text-Dependent and Text-Independent Writer Identification Approaches: Challenges and Future Directions"
2021	International Journal of Intelligent Information Technologies (IJIIT) Vol. 17 Issue 1 PP 53-67	Rajneesh Rani, Harpreet Singh "Fingerprint Presentation Attack Detection Using Transfer Learning Approach"
2021	International Journal of Medical Engineering and Informatics Vol. 13 Issue 6 pp 487-496	Anoop Kumar Singh, Deepti Kakkar, Tanu Wadhera, Rajneesh Rani "" Adaptive neuro-fuzzy-based attention deficit/hyperactivity disorder diagnostic system
2021	International Journal of Biomedical Engineering and Technology Vol. 37 issue 3 pp 275-289	Shalu, Rajneesh Rani, Aman Kamboj "Automated melanoma skin cancer detection from digital images"
2021	International Journal of Computer Applications in Technology Vol. 66 Issue 3-4 pp. 415-426	Asmita Mahajan, Nonita Sharma, Firas Husham Almukhtar, Monika Mangla, Krishna Pal Sharma, Rajneesh Rani "An ensemble approach to forecast COVID-19 incidences using linear and non-linear statistical models"
2021	International Journal of Image and Graphics Pages 2140011	Rajneesh Rani, Renu Dhir, Deepti Kakkar, Nonita Sharma "Script Identification for Printed and Handwritten Indian Documents: An Empirical Study of Different Feature Classifier Combinations"
2021	International Journal of Image and Graphics Pages 2140014	Rishipal Singh, Rajneesh Rani, Aman Kamboj "An Optimized Approach for Intra-Class Fruit Classification Using Deep Convolutional Neural Network"
2021	Multidimensional Systems and Signal Processing	Gurjinder Kaur, Samayveer Singh, Rajneesh Rani "PVO based reversible data hiding technique for roughly textured images"
2021	The Visual Computer pp 1-34	Aman Kamboj, Rajneesh Rani, Aditya Nigam "A comprehensive survey and deep learning-based approach for human recognition using ear biometric"
2021	IET Image Processing	Gurjinder Kaur, Samayveer Singh, Rajneesh Rani, Rajeev Kumar, Aruna Malik "High-quality reversible data hiding scheme using sorting and enhanced pairwise PEE"
2021	Pattern Analysis and Applications, Vol. 24, issue 2 , pp. 779-800	Aman Kamboj, Rajneesh Rani, Aditya Nigam, Ranjeet Ranjan Jha "Ced-net: context-aware ear detection network for unconstrained images"
2021	Multimedia Tools and Applications, Vol. 80, issue 17, pp. 26571-26613	Aman Kamboj, Rajneesh Rani, Aditya Nigam "CG-ERNet: a lightweight Curvature Gabor filtering based ear recognition network for data scarce scenario"
2021	Multimedia Tools and ApplicationsArchives of Computational Methods in Engineering, Vol.28, issue 5, pp. 3517-3568	Gurjinder Kaur, Samayveer Singh, Rajneesh Rani, Rajeev Kumar "A comprehensive study of reversible data hiding (RDH) schemes based on pixel value ordering (PVO)"
2021	Artificial Intelligence Review, Volume 54 ,Issue 6 ,Pages 4317-4377	Shilpa Mahajan, Rajneesh Rani "Text detection and localization in scene images: a broad review"

2021	Emerging Technologies for Healthcare: Internet of Things and Deep Learning Models, Pages 279-298	Tanu Wadhwa, Deepti Kakkar, Rajneesh Rani "Behavioral modeling using deep neural network framework for ASD diagnosis and prognosis"
2021	International Journal of Agricultural and Environmental Information Systems (IJAEIS), Volume 12, Issue 4, Pages 1-22	Ganesh Bahadur Singh, Rajneesh Rani, Nonita Sharma, Deepti Kakkar "Identification of Tomato Leaf Diseases Using Deep Convolutional Neural Networks"
2020	Journal of Advanced Research in Dynamical and Control Systems Vol. 12, pp. 601-608	A Kumar, R Rani, N Sharma, S Purohit "Connected component analysis with rnn for performing secured data management with hidden data in finger prints"
2020	Advances in Mathematics: Scientific Journal Vol. 9 issue 6	Rajneesh Rani Nikkey Sharma, Renu Dhir "CRACK DETECTION IN CONCRETE USING TRANSFER LEARNING"
2020	International Journal of Intelligent Computing and Cybernetics	Jiten Chaudhary, Rajneesh Rani, Aman Kamboj "Deep learning-based approach for segmentation of glioma sub-regions in MRI"
2020	International Journal of Agricultural and Environmental Information Systems (IJAEIS) Vol. 11 issue 4 pp. 25-40	Keshav Gupta, Rajneesh Rani, Nimratveer Kaur Bahia "Plant-Seedling Classification Using Transfer Learning-Based Deep Convolutional Neural Networks"
2020	arXiv preprint arXiv:2010.03990	Aman Kamboj, Rajneesh Rani, Aditya Nigam, Ranjeet Ranjan Jha "UESegNet: Context Aware Unconstrained ROI Segmentation Networks for Ear Biometric"
2019	International Journal of Biomedical Engineering and Technology(Accepted)	Shallu Sahota, RAJNEESH RANI, Aman Kamboj, "Automated Melanoma Skin Cancer Detection from Digital Images"
2019	in Journal of science and technology(ACCEPTED)	Nimratveer Kaur Bahia, RAJNEESH RANI, Aman Kamboj, Deepti Kakkar "Hybrid Feature Extraction and Machine Learning Approach for Fruits and Vegetable Classification"
2018	Progress in Advanced Computing and Intelligent Engineering: Proceedings of ICACIE 2017, Volume 2	Rajneesh Rani Monika, Aman Kamboj "Brain tumor classification for mr imaging using support vector machine"
2018	International Journals of Advanced Research in Computer Science and Software Engineering ISSN	R Rani, S Lavanya, B Poojitha "Iot based home security system using raspberry pi with email and voice alert"
2017	Cybernetics and Information Technologies 17, Issue 2,134-150	Monu Verma, Rajneesh Rani, "Significant Secret Image Sharing Scheme Based on Boolean Operation"
2016	International Journal of Scientific Engineering and Technology Research Volume.05, IssueNo.05	P SIREESHA, R RANI "Embedded System in Big Data Wireless Sensor Network"
2016	Journal of SAFOG , VOL 8, Issue 2	A Gautam, P Agrawal, A Nigam, R Rani "To study association between upper gastrointestinal symptoms and body mass index in first trimester of pregnancy"
2014	Minerva Biotechnologica , VOL 26 , Issue 1,PP 25-30	R Pannu, D Kumar, R Rani, K Chaudhary "Molecular cloning of endoglucanase gene of Trichoderma Reesei 5A into Saccharomyces cerevisiae"
2014	Kathmandu University Medical Journal , Vol 12 ,Issue 4	M Sinha, R Kaur, R Gupta, R Rani, A Aggarwal "Rare presentation of chorioadenoma destruens as acute haemoperitoneum mimicking ruptured ectopic pregnancy"
2014	International Journal of Advanced Science and Technology, SERSC Publications, 66, ISSN No. 2005-4238, pp.25-38	Rajneesh Rani, Renu Dhir and Gurpreet Singh Lehal, "Gabor Features based script identification of lines within a Bilingual/Trilingual Document"

2014	In the International Journal of signal and image processing, 4(1) pp. 79-84 ISSN No. 2005-4254.	Rajneesh Rani, Renu Dhir and Gurpreet Singh Lehal, "Structural and Gabor Features for Script Identification of Gurumukhi and English words",
2013	International Journal of Environmental Engineering and Management ISSN 2231-1319, Volume 4, Number 4 (2013), pp. 323-330	K Singh, R Rani, TJM Sinha, Shalini Srivastava "Development of 'environmental friendly aminated nanocrystalline cellulose' for decontamination of arsenic species from water bodies: bioremediation"
2013	International Journal of Advanced Research in Computer Science and Software Engineering , Vol 3 , Issue 1	Gurpreet Singh, Chandan Jyoti Kumar, Rajneesh Rani, Dr Renu Dhir "Feature extraction of Gurmukhi script and numerals: A review of offline techniques"
2013	International Journal of Graphics and Image Processing SERSC Publications. Vol. 6 No. 5 (2013), pp. 25-38	Rajneesh Rani, Renu Dhir and Gurpreet Singh Lehal, "Modified Gabor feature Extraction Method for word level script identification- Experimentation with Gurmukhi and English Scripts"
2013	International Journal of Advanced Research in Computer Science and Software Engineering ISSN 2277-128X Vol. 3 –No.1 , pp.257-263	Chandan Jyoti Kumar, Gurpreet Singh, Rajneesh Rani, Dr. Renu Dhir, "Handwritten Segmentation in Bangla Script: A Review of Offline Techniques"
2012	International Journal of Advanced Research in Computer Science and Software Engineering ,VOL 2 ,Issue 6	Gita Sinha, Rajneesh Rani, Renu Dhir "Handwritten Devanagari Numeral Recognition Using Zonal Based Feature Extraction Method and SVM Classifier"
2012	International Conference on Electronics and Communication Engineering, Bangalore , pp 165-167	R Rani, M Sudhakara Reddy "Design and Implementation of Embedded Control Warning System for Vehicle Reversing"
2012	International Journal of Advanced Research in Computer Science and Software Engineering ,VOL 2 ,Issue 5	Anita Jindal, Renu Dhir, Rajneesh Rani , "Diagonal features and SVM classifier for handwritten Gurumukhi character recognition"
2012	International Journal of Advanced Research in Computer Science and Software Engineering , VOL 2, Issue 5	Ashutosh Aggarwal, Rajneesh Rani, Renu Dhir "Handwritten Devanagari character recognition using gradient features "
2012	International Journal of Computer Applications ,VOL 47 ,Issue 21	Gita Sinha, Rajneesh Rani, Renu Dhir "Handwritten Gurmukhi numeral recognition using zone-based hybrid feature extraction techniques"
2012	Proceedings of the world congress on engineering and computer science ,VOL 1, pp 24-26	Saiprakash Palakollu, Renu Dhir, Rajneesh Rani "Handwritten Hindi text segmentation techniques for lines and characters"
2012	International Journal of Computer Applications (0975-888), Vol.47-No. 18	Anita Rani, Renu Dhir and Rajneesh Rani, "Combination of Different Feature Sets and SVM Classifier for Handwritten Gurumukhi Numeral Recognition"
2012	International Journal of Advanced Research in Computer Science and Software Engineering (ISSN. 2277 128X), Vol.2-Issue 6,Pp 106-111.	Gita Sinha, Anita Rani, Renu Dhir and Rajneesh Rani, "Zone Based Feature Extraction Techniques and SVM for Handwritten Gurmukhi Character Recognition"

2012	International Journal of Advanced Research in Computer Science and Software Engineering (ISSN. 2277 128X), Vol.2-Issue 6,Pp 288-293.	Gita Sinha, Renu Dhir and Rajneesh Rani, "Handwritten Gurmukhi Character Recognition Using K-NN and SVM Classifier"
2011	Special Issue of International Journal of Computer Applications , VOL 5, pp975-887	Saiprakash Palakollu, Renu Dhir, Rajneesh Rani " A new technique for line segmentation of handwritten Hindi text"
2011	Int. J. Comput. Appl, VOL 22	Mahesh Jangid Kartar Singh, Renu Dhir, Rajneesh Rani "Performance comparison of devanagari handwritten numerals recognition"
2011	International Journal of Computer Science and Information Technologies, Vol. 2 (3), pp.-1244-1247	Saiprakash Palakollu, Renu Dhir and Rajneesh Rani, "Segmentation of Devanagari Script"
2011	International Journal of Electrical, Electronics and Computer Science, ISSN: 2221-7258 Vol. 1, Issue 2, pp. 41-46	Mahesh Jangid, Renu Dhir and Rajneesh Rani, "Novel Approach: Recognition of Devanagari Handwritten Numerals"
2011	International Journal of Computer Applications, ISSN 0975-8887 Vol. 22- No. 1, pp. 1-6	Mahesh Jangid, Renu Dhir, Rajneesh Rani and Kartar Singh, "Performance comparison of Devanagari Numerals Recognition"
2011	International Journal of Computer Science and Information Technologies, ISSN 0975-9646 Vol. 2, Issue 3, pp. 1036-1041	Kartar Singh Siddharth, Renu Dhir and Rajneesh Rani, "Handwritten Gurumukhi Character Recognition Using Zoning Density and Background Directional Distribution Features"

## Conference Publications :

Year	Conference	Publication
2022	The ICRIC (International Conference on Recent Innovations in Computing)	Sushree Deepa Jena, Jagdeep Kaur, Rajneesh Rani "A Review of Prediction of Software Defect by Using Machine Learning Algorithms"
2022	Global Conference on Artificial Intelligence and Applications (GCAIA, 2021)	Kirti Sonkar, Rajneesh Rani, Renu Dhir "Iris Recognition Using Transfer Learning of Inception V3"
2021	Sixth International Conference on Image Information Processing (ICIIP)	Rajneesh Rani, Akshay Kumar, Amrita Rai "A Brief Review on Existing Techniques for Detecting Digital Image Forgery"
2021	2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC)	Vipan Verma, Rajneesh Rani "Facial Expression Recognition: A Review"
2021	2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC)	Kirti Sonkar, Rajneesh Rani "Cancelable Iris Biometric: A Review"
2021	2021 8th International Conference on Signal Processing and Integrated Networks (SPIN) Pages 585-590	Vipan Verma, Rajneesh Rani "Recognition Of Facial Expressions Using A Deep Neural Network"
2020	SoCTA (Soft Computing: Theories and Applications)	Harpreet Singh, Rajneesh Rani, Shilpa Mahajan "Detection and classification of citrus leaf disease using hybrid features"
2020	Proceedings of the International Conference on Innovative Computing & Communications (ICICC)	Ganesh Bhadur, Rajneesh Rani "Agricultural Crops Disease Identification and Classification through Leaf Images using Machine Learning and Deep Learning Technique: A Review"

2020	International Conference on Signal Processing and Integrated Networks (SPIN) 2020	Gurjinder Kaur, Samayveer Singh, Rajneesh Rani "A high capacity reversible data hiding technique based on pixel value ordering using interlock partitioning"
2020	Proceedings of the International Conference on Innovative Computing & Communications (ICICC)	Rishipal Singh, Rajneesh Rani "Semantic segmentation using deep convolutional neural network: A review"
2019	CPIE(International Conference on Production and Industrial Engineering), NIT Jalandhar –June 2019	Keshav Gupta and Rajneesh Rani, "Biometric Authentication System using 3D Ear: A Review"
2019	CPIE(International Conference on Production and Industrial Engineering), NIT Jalandhar –June 2019.	Harpreet Singh and Rajneesh Rani, "Liveness Detection using Deep Learning- A Survey"
2019	2019 International Conference on Issues and Challenges in Intelligent Computing Techniques (ICICT)	Shilpa Mahajan, Rajneesh Rani "A decade on script identification from natural images/videos: A review"
2018	First International Conference on Secure Cyber Computing and Communication (ICSCCC), Jalandhar, India,	A. Kamboj, R. Rani and J. Chaudhary, "Deep Learning Approaches for Brain Tumor Segmentation: A Review,"
2018	First International Conference on Secure Cyber Computing and Communication (ICSCCC), Jalandhar, India, pp. 584-588.	S. Mahajan and R. Rani "Text Extraction from Indian and Non-Indian Natural Scene Images: A Review,"
2018	First International Conference on Secure Cyber Computing and Communication (ICSCCC), Jalandhar, India, 2018, pp. 550-555	R. Kaur and R. Rani, "ROI and Non-ROI based Medical Image Compression Techniques: A Survey and Comparative Review,"
2018	SoCTA (Soft Computing: Theories and Applications), Jalandhar, India	Harpreet Singh, Rajneesh Rani, Shilpa Mahajan, "Detection and Classification of Citrus Leaf Disease using Hybrid Features",
2017	International Conference on Advanced Computing and Intelligent Engineering	Monika, Rajneesh Rani, Aman Kamboj, "Brain Tumor Classification for MR Imaging using Support Vector Machine"
2017	International Conference on Advanced Computing and Intelligent Engineering	Pritam Kumari, Rajneesh Rani, "Improved(k,n) Visual Secret Sharing based on Random Grids
2017	International Conference on Advanced Computing and Intelligent Engineering	Rashmi Jakhmola, Rajneesh Rani, "Enhanced Digital Video Watermarking Technique using 2 Level DWT
2016	International Conference on Computing, Communication and Automation ICCCA-2016	Monu verma, Rajneesh Rani, "Strong Threshold Secret Image Sharing Base on Boolean Operation", P.P 1145-1149,
2016	International Conference on Advances in Computing, Communications and Informatics ICACCI-2016	Pranay Sakhare, Dr Rajneesh Rani, Ranjeet Kumar Rout, "Identification of olfactory receptors using a parametric model"
2016	International Conference on Advances in Computing, Communications and Informatics ICACCI-2016	Rajat Kumar Mehta, Dr Rajneesh Rani, "Pattern generation and symmetric key block ciphering using cellular automata"
2015	International Conference on Computing, Communication and Automation	Gurpreet Singh, Chandan Jyoti Kumar and Rajneesh Rani, "Performance Analysis of Different Classifiers for Recognition of Handwritten Gurmukhi Characters using Hybrid Features"
2013	International Conference on Document Analysis and Recognition	Rajneesh Rani, Renu Dhir and Gurpreet Singh Lehal, "Script Identification of Pre-segmented Multi-Font Characters and Digits"
2012	International Conference on Recent Advances and Future Trends in Information Technology	Kartar Singh Siddharth, Renu Dhir, Rajneesh Rani, "Comparative Recognition of Handwritten Gurmukhi Numerals using Different Feature Sets and Classifiers"

2012	International Conference on Signal Processing and Imaging Engineering	Saiprakash Palakollu, Renu Dhir, Rajneesh Rani, "Handwritten Hindi Text Segmentation Techniques for Lines and Characters"
2012	Workshop on Document Analysis and Recognition in International Conference on Computer Vision, Imaging and Graphics	Rajneesh Rani, Renu Dhir, Gurpreet Singh Lehal, "Performance analysis of Feature Extractors and Classifiers for Script recognition of English and Gurumukhi words"
2011	2011 International Conference on Image Information Processing	Mahesh Jangid, Renu Dhir, Rajneesh Rani, Kartar Singh "SVM classifier for recognition of handwritten devanagari numeral"
2011	Proceedings of International Conference on Computer, Information, and Systems Science, and Engineering", held at Dubai, UAE, Pp. 1034-1037 January 25-27, 2011	Rajneesh Rani , Renu Dhir and G S Lehal, "Identification of Printed Words and English Numerals Using Gabor Features"
2011	International Conference on Electronics, Information and Communication Systems Engineering	Saiprakash Palakollu, Renu Dhir and Rajneesh Rani, "A New Technique for Line Segmentation Handwritten Hindi Text"
2010	Proceedings of International Conference on Advances in Communication, Network, and Computing"	Rajneesh Rani and Renu Dhir, "A Scheme for Script Identification of Printed Punjabi Words and English Numerals" in the
	2021 2nd International Conference on Secure Cyber Computing and Communications (ICSCCC)	Kirti Sonkar, Rajneesh Rani

### Book/Chapter Publications :

Type	Title	Publisher	Authors	ISBN/ISS N No.	Year
	A Review of Recent Issues and Challenges of Fault Management Techniques in Underwater Wireless Sensor Network	IGI Global	Nonita Sharma, Krishna Pal Sharma, Rajneesh Rani		2021
	Home automation and security system using internet of thingsIGI Global	IGI Global	Mahesh Kushwah, Rajneesh Rani		2021
	Comparative Study on ASD Identification Using Machine and Deep Learning	IGI Global	Rajandeep Kaur, Rajneesh Rani		2020
	EarLocalizer: A Deep-Learning-Based Ear Localization Model for Side Face Images in the Wild, in "Handbook of Research on Healthcare Biometrics." pp. 137-159	IGI Global	Aman Kamboj, Rajneesh Rani, Aditya Nigam"	300618-02 1209	2019
International	"Home Automation and Security System using Internet of Things," In, "Handbook of Research on the IoT, Cloud Computing, and Wireless Network Optimization."pp. 235-238	IGI Global	2. Mahesh, Rajneesh Rani,	300518-12 4901	2019
International	"Brain Tumor Classification for MR Imaging Using Support Vector Machine' 'Progress in Advanced Computing and Intelligent Engineering' with ISBN No. 978-981-13-0223-7, Panigrahi et al (eds.)	Springer	1. Monika, Rajneesh Rani and Aman Kambojin . PP. 165-176	978-981-1 3-0223-7	2019

	Improved (k, n) Visual Secret Sharing Based on Random Grids "Progress in Advanced Computing and Intelligent Engineering"	Springer	Pritam Kumari, Rajneesh Rani		2019
	"Enhanced digital video watermarking technique using 2-level DWT" Progress in advanced computing and intelligent engineering	Springer	Rashmi Jakhmola, Rajneesh Rani		2019
International	Comparative Analysis of Gabor and Discriminating Feature Extraction Techniques for Script Identification	Springer	Rajneesh Rani, Renu Dhir, G. S. Lehal	ISSN 1865-0929	2011

## Research Projects :

Role	Project Type	Title	Funding Agency	From	To	Amount	Status	Co-Investigator
Co-Investigator	Research Project	Development of Robust Document Image Analysis and Bi Lingual Reorganizations System for printed Gurumukhi and Roman scripts	Ministry of Communication and Information Technology, Govt. Of India	2010	2015	52.90 Lakh	Completed	Dr Gurpreet Singh Lehal, Dr. Chandan Singh, Dr Renu Dhir
Co-Investigator	Research Project	Single Object tracking in a video/Image Sequence using Machine/Deep Learning Techniques	Indian Space Research Organisation (ISRO)	2020	2022	18 Lakh	Completed	Dr. Om Prakash Verma, Dr Rajneesh Rani, Dr Samayveer Singh, Dr Vineet Jakhetiya

## Events Organized :

Category	Type	Title	Venue	From	To	Designation
ISTE workshop	National	Two weeks ISTE workshop "Effective Teaching/Learning of Computer Programming"	NIT Jalandhar as a Remote Center	28-Jun-2010	10-Jul-2010	Remoter Center Coordinator
Two-week ISTE Workshop	National	"Database Management Systems"	NIT Jalandhar as a Remote Center	13-Dec-2010	23-Dec-2010	Remoter Center Coordinator
One week short term course (STC)	National	"Recent Advances in Computer Networks & Information Security"	NIT Jalandhar	08-Jul-2013	12-Jul-2013	Coordinator



One week STC	National	"Recent Trends in Software Engineering and Knowledge Mining (RTSEKM-2015)"	NIT Jalandhar	01-Jun-2015	05-Jun-2015	Coordinator
One week	National	"Recent advances in Image and Natural Language Processing(RAINLP-2016)"	NIT Jalandhar 5 days	30-May-2016	03-Jun-2016	Coordinator
Workshop	National	Induction Cum Orientation Programme for B.Tech 1st year Students	NIT Jalandhar	02-08-2018	07-08-2018	Co-Coordinator
Short Term Course	National	TEQIP-III Sponsered Short Term Course Machine and Deep Learning in Computer Vision	NIT Jalandhar	09-08-2019	13-08-2019	Coordinator
Short Term Course	National	TEQIP-III Sponsered Short Term Course : "Cloud of Things: Theoretical and Practical Implications"	NIT Jalandhar	10-08-2020	14-08-2020	Coordinator
Short Term Course	National	TEQIP-III Sponsered Short Term Course : "Recent Advances in Data Science, Image and Natural Language Processing "	NIT Jalandhar	21-09-2020	25-09-2020	Coordinator
Short Term Course	National	Self Sponsered Course on Recent Advances in Data Science and Computational Intelligence	Online Platform	26-04-2021	30-04-2021	Coordinator
Workshop	National	Computer Based Training in MS Office and HTML	Govt Sr. Sec School, Nussi, Dist. Jalandhar	17-10-2022	21-10-2022	Coordinator
Short Term Course	National	ISEA Sponsered STC on "Recent Trends in Information Security and Privacy"	Online Mode	07-11-2022	11-11-2022	Coordinator

### Professional Affiliations :

Designation	Organization
Member	Indian Society of Technical Education

### PhD Supervised :

Scholar Name	Research Topic	Status	Year	Co-Supervisor
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Aman Kamboj	Biometric Authentication	Completed	Registered-2016, Completed -2021	Dr. Aditya Nigam, Assistant Professor, IIT Mandi
Vishal Jayaswal	Image Processing using Deep Learning(Broad Area)	Ongoing	Regd. Year- 2021	Dr. Jagdeep Kaur
Rajandeep Kaur	Writer Identification using Deep Learning	Ongoing	Regd. Year- 2018	Dr. Roop Pahuja
Nimratveer Kaur Bahia	Indian Sign Language Recognition	Ongoing	2019	
Shilpa Mahajan	Scenic Image Analysis	Ongoing	2018	

## PG Dissertation Guided :

Student Name	Dissertation Title	Status	Year	Co-Supervisor
Aayush Poddar (20203007)	Hybrid Architecture using CNN and LSTM for Image Captioning in Hindi Language	Completed	2022	
Akshay Kumar (20203002)	Auto-Encoder Architecture for Image Steganography using Skip Connections and Dilated InceptionNet	Completed	2022	
Amrita Rai (20203003)	Hand Gesture Recognition using Deep Learning	Completed	2022	
Simranjit Kaur (19903008)	Passive Image Forgery detection using Convolutional Neural Network	Completed	2021	
Sariva Sharma (199903005)	Unet Based Framework for Image Inpainting with Irregular Holes	Completed	2021	
Vipan Verma (19203033)	Performance Analysis of Image Augmentation techniques for Facial Expression Recognition using Deep Learning	Completed	2021	
Ganesh Bahadur Singh	Recognition of Tomato Crop Disease using Deep Convolutional Neural Networks	Completed	2020	
Gurjinder Kaur	Design and analysis of Sorting based Reversible Data Hiding Techniques	Completed	2020	
Rishipal Singh	Intra Class Fruits and Vegetable Classification using Deep Learning	Completed	2020	
Jiten Chaudhary (17203009)	Segmentation of Brain Tumor Sub-regions from MRI using Deep Learning	Completed	2019	
Keshav Gupta (17203010)	Plant Seedling Classification using Transfer Learning Based Deep Convolutional Neural Networks	Completed	2019	
Harpreet Singh (17203104)	Transfer Learning Based Model For Fingerprint Liveness Detection	Completed	2019	
Meenakshi (16203014)	Modified Segmentation Algorithm for Iris Recognition	Completed	2018	
Mahesh (16203013)	Home Automation and Security System using Internet of Things	Completed	2018	
Harpreet Singh (16203009)	Citrus Leaf Disease Detection and Classification using Image Processing Techniques	Completed	2018	
Nimrat (16203016)	Automatic Detection of Fruits and Vegetables using Machine Learning	Completed	2018	
Shalu (16203022)	Automated Melanoma Skin Cancer Detection from Digital Images	Completed	2018	

Pritam Kumari (15203015)	Improved (k,n) Visual secret sharing based on Random grids	Completed	2017	
Rashmi Jakhmola (15203008)	Enhanced Digital video watermarking theme using DWT and Gaussian filter: sturdy against Geometric attack	Completed	2017	
Monika Meena (15203023)	Brain Tumor Classification for MR Images using Support Vector Machine	Completed	2017	
Deniel Dillu (14203023)	Adaptive Watermarking using Image Depth Map	Completed	2017	
Pranay Sakhare (14203024)	Identification of Olfactory Receptors using a parametric model	Completed	2016	
Rajat Kumar Mehta (14223002)	Pattern Generation and Symmetric Key encipher	Completed	2016	
Monu Verma (14203005)	Significant Secret image sharing based on Boolean operation	Completed	2016	
Jagmohan Sahu (14203018)	Words and Character Segmentation for Handwritten Deavanagari Script	Completed	2016	
Visakh (13203015)	An effective approach for image inpainting using combined method	Completed	2015	
Pawan Kumar Mangal (13203016)	A Fusion of statistical Distance and Signature Length based approach for Offline Signature Verification	Completed	2015	
Bavanth Ravinder (13203002)	An efficient method for Reversing Data Hiding in Encrypted Images	Completed	2015	
Deepika (13203012)	New Lattice based and Matrix based approaches for analyzing class cohesion	Completed	2015	
Neetu Kumari (13203003)	Offline Signature Verification and Forgery Detection using Contour based Features	Completed	2015	
Manoj Kumar (13203005)	Writer Identification for Devanagari Script	Completed	2015	
Amlan Jyoti Basumatari (12203002)	Character Segmentation of assamese printed and handwritten words using classifier based sliding window tech	Completed	2014	
Arjun Singh (12203004)	Handwritten Devanagari character recognition using SVM and kNN	Completed	2014	
Brahmanand Kaushik (12203007)	Image Enhancement by the fusion of fuzzy contrast adjusted source images using wavelet	Completed	2014	
Shubham Shukla (12203022)	Digital Image Mosaicing using optimized KD-Tree Search	Completed	2014	
Gaurav Kumar (12203010)	Off-Line Signature Verification using Chain Code Histogram	Completed	2014	
Jashandeep Kaur (10203036)	An efficient skew detection technique for scanned documents using Fast Fourier transform	Completed	2014	
Anand Tanwar (11203002)	Image Encryption using Chaotic Map and Prime Modulo Multiplicative Linear Congruential Generator	Completed	2013	
Chandan Jyoti Kumar (11203005)	Seam Carving and Morphological Operation based algorithm for optical character recognition of Machine Printed Indian Scripts	Completed	2013	

Gagandeep Singh (11203009)	Text Extraction from Images Containing Gurumukhi and Hindi text using Edge Map and stroke Width filtering	Completed	2013	
Gurpreet Singh (11203011)	Performance Analysis of Different Classifiers for Recognition of Handwritten Gurumukhi Characters and Numerals using Hybrid Features	Completed	2013	
Ashutosh Aggarwal (10203004)	Implementation of Gradient Technique to extract Features from Handwritten Gurumukhi and Devanagari Script	Completed	2012	
Gita Sinha (10203005)	Isolated Handwritten Numerals Recognition of Indian Scripts using Zone based Features	Completed	2012	
Anita Rani (10203002)	Comparative Analysis of Handwritten Gurumukhi Script using Different Classifiers	Completed	2012	
Kartar Singh Siddharth	Handwritten Gurumukhi Character Recognition	Completed	2011	
Mahesh Jangid	Devanagari Numeral Recognition through recursive sub-division of the sampled image	Completed	2011	
SaiPrakash Pallakollu	Segmentation of Handwritten Devanagari Script	Completed	2011	

### Patents :

Name	Reg./Ref. No.	Date of Award/Filling	Organization	Status
Intra Class Fruit Classification using Deep Learning (CopyRight)	SW-14714/2021	09-07-2021	Copyright Office- Government of India	Granted

### Admin. Responsibilities :

Position Held	Organization	From	To
Local GIAN Coordinator(NIT Jalandhar)	(NIT Jalandhar)	2020	Till date
Head of Deapartment of Computer Science and Engineering	NIT Jalandhar	26-12-2022	Till date
MTech Coordinator(CSE and CSE(Specialization IS)	NIT Jalandhar	01-02-2019	31-12-2022