
Publications:

Journals (SCI/Scopus)

- Ashish, **Vibhav Prakash Singh**, Ravi Bhusan Mishra, and Anil Kumar Singh. "Sentence polarity detection using stepwise greedy correlation based feature selection and random forests: An fMRI study." *Journal of Neurolinguistics* 59 (2021): 100985. Elsevier, (SCI-1.853) <https://doi.org/10.1016/j.jneuroling.2021.100985>
- Kalita, Dhruva Jyoti, **Vibhav Prakash Singh**, and Vinay Kumar. "A Dynamic Framework for Tuning SVM Hyper Parameters based on Moth-Flame Optimization and Knowledge-Based-Search." *Expert Systems with Applications* (2020): 114139, Elsevier. (SCI-5.5) DOI: <https://doi.org/10.1016/j.eswa.2020.114139>
- Nagendra Pratap Singh and **Vibhav Prakash Singh**, "Efficient Segmentation and Registration of Retinal Image Using Gumble Probability Distribution and BRISK Feature", *Traitement du Signal*, Vol. 37 (5), pp. 855-864, Dec 2020. (SCI-1.54) DOI: <https://doi.org/10.18280/ts.370519>
- Vinay Kumar, Ashish Kumar Maurya, Karam Veer Singh, Aditya Narayan Hati, and **Vibhav Prakash Singh**. "Safety analysis of safety-critical systems for their applicability on NPP systems: A state-of-the-art review." *Quality and Reliability Engineering International*, Wiley (SCI-1.718) <https://doi.org/10.1002/qre.2828>
- **Vibhav Prakash Singh**, Rajeev Srivastava, Yadunath Pathak, Shailendra Tiwari, and Kuldeep Kaur. "Content-based image retrieval based on supervised learning and statistical-based moments." *Modern Physics Letters B* 33, no. 19 (2019): 1950213, DOI: <https://doi.org/10.1142/S0217984919502130> (SCI-1.34)
- **Vibhav Prakash Singh**, and Rajeev Srivastava, "Automated and effective content-based mammogram retrieval using wavelet based CS-LBP feature and self-organizing map", *Biocybernetics and Biomedical Engineering*. Vol. (38), Issue (1), pp.90-105, 2018. <https://doi.org/10.1016/j.bbe.2017.09.003>, Elsevier (SCI-2.5),
- **Vibhav Prakash Singh**, Subodh Srivastava, and Rajeev Srivastava, "An Efficient and Automated Content Based Image Retrieval for Digital Mammography", *Journal of X-Ray Science and Technology* 26 (2018), pp. 29–49, DOI: [10.3233/XST-17306](https://doi.org/10.3233/XST-17306), IOS Press UK, (SCI-1.34)
- **Vibhav Prakash Singh**, and Rajeev Srivastava, "Improved CBIR System Using Fusion of Fast Features with Varying Weighted Similarity Measure and Random Forest Classifier", *Multimedia Tools and Applications*, Vol.77, pp. 11435-14460, 2017, *Springer* (SCI-2.2). <https://doi.org/10.1007/s11042-017-5036-8>
- **Vibhav Prakash Singh**, Subodh Srivastava, and Rajeev Srivastava, "Effective Mammogram Classification Based on Center Symmetric-LBP features in Wavelet Domain Using Random Forest Classifier", *Technology and Health Care*, Vol. 25, (2017) 709–727, DOI: [10.3233/THC-170851](https://doi.org/10.3233/THC-170851), IOS Press UK, (SCI-0.81).

- Ashish Ranjan, **Vibhav Prakash Singh**, Anil Kumar Singh, and Ravi Bhushan Mishra. "Classifying Brain State in Sentence Polarity Exposure: An ANN Model for fMRI Data", *Revue d'Intelligence Artificielle*, Vol. 34 No. 3, pp. 361-368, June 2020. (Scopus index) DOI: <https://doi.org/10.18280/ria.340315>
- **Vibhav Prakash Singh** and Rajeev Srivastava, "Effective Image Retrieval Based on Hybrid Features with Weighted Similarity Measure and Query Image Classification", *Int. J. Computational Vision and Robotics*, Vol. 8, No. 2, 2018, pp.91-121, Inderscience DOI: <https://doi.org/10.1504/IJCVR.2018.091979> ((Scopus, ACM, DBLP Index)
- **Vibhav Prakash Singh**, and Rajeev Srivastava, "Content-Based Mammogram Retrieval Using Wavelet based Complete-LBP and K-means Clustering for the Diagnosis of Breast Cancer", *International Journal of Hybrid Intelligent System*", Vol. 14, 2017, pp.31-39, IOS Press, DOI: [10.3233/HIS-170240](https://doi.org/10.3233/HIS-170240) (Scopus, ACM, DBLP Index)
- SP Singh, **VP Singh**, and AK Mehta, "Differential Evolution Using Homeostasis Adaption Based Mutation Operator and its Application for Software Cost Estimation", *Journal of King Saud University-Computer and Information System*, 2018, (Scopus Index-Elsevier), DOI: <https://doi.org/10.1016/j.jksuci.2018.05.009>

Journals (ACM/DBLP/Other Indexed):

- **Vibhav Prakash Singh**, Ayush Srivastava, Devang Kulshreshtha, Arpit Chaudhary, and Rajeev Srivastava. "Mammogram Classification Using Selected GLCM Features and Random Forest Classifier." *International Journal of Computer Science and Information Security* 14, no. 6 (2016): 82. (ESCI)
- **Vibhav Prakash Singh**, Subodh Srivastava, and Rajeev Srivastava. "An Efficient Image Retrieval Based on Fusion of Fast Features and Query Image Classification." *International Journal of Rough Sets and Data Analysis (IJRSDA)* 4.1 (2017): 19-37 (ACM, DBLP Index).
- **Vibhav Prakash Singh**, Ashim Gupta, and Rajeev Srivastava. "Fast and effective image retrieval using colour and texture features with self-organising map." *International Journal of Computational Systems Engineering* Vol. 3, no. 3 (2017): 133-143., Inderscience, UK, DOI: <https://doi.org/10.1504/IJCSYSE.2017.086738>.
- Yashankit, **Vibhav Prakash Singh**, and Rajeev Srivastava "Comparative Analysis of Distance Metrics for Designing an Effective Content-Based Image Retrieval System Using Colour and Texture Features", *International Journal of Image, Graphics and Signal Processing*, 9 (12), 58-64, 2018. DOI: [10.5815/ijigsp](https://doi.org/10.5815/ijigsp)
- Chakrapani, Sumit Raj, and **Vibhav Prakash Singh**, "Detection of Chronic Kidney Disease Using Artificial Neural Network", *International Journal of Applied Engineering Research*, Volume 14, pp. 145-149, Number 10, 2019 (UGC Listed, Scopus (2017 index)).
- Shashank Tripathi and **Vibhav Prakash Singh**. Integrated Networks: A Survey. *Current Trends in Information Technology*. 2019; 9(1), pp. 22–29
- **Singh, Vibhav Prakash**, Singh Gaurav Arvind, and Arindam G. Mahapatra. "Hybrid Correlation based Gene Selection for Accurate Cancer Classification of Gene Expression Data." *International Journal of Computer Applications* 43, no. 14 (2012): 13-18.

- Meena, Yogesh Kumar, Singh, **Vibhav Prakash** "Text documents clustering using genetic algorithm and discrete differential evolution." *International Journal of Computer Applications* 43, no. 1 (2012): 16-19.
 - Kumar, Neeraj, **Vibhav Prakash Singh**, Himanshu Mishra, and Atul Barsaiyan. "Modified Kerberos Model for Sustaining the Integrity Privacy & Authentication of Critical Data in Cloud Computing", *International Journal of Scientific & Engineering Research*, Volume-9, Issues-6, 2014.
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Research Projects:

- **Title:** Content-Based Image Retrieval System Assisted by Mammogram Classification for the Diagnosis of Breast Cancer
 - **Agency:** Collaborative Research Scheme under the Proposal of AICTE and TEQIP.
 - **Project Grant:** Rs. 7.30 Lacs
 - **Role:** CO-PI
 - **Grant Year:** June 2019
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Patents:

- Methods for Designing Dynamic framework for Tuning of SVM hyper parameters based on MFO and Knowledge-Based Search, Application No: 202031014705, published on 15/05/2020.
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Books/Book Chapters:

- **Vibhav Prakash Singh** and Ashish Kumar Maurya, "Role of Machine learning and Texture Features for the Diagnosis of Laryngeal Cancer", *Machine Learning for Healthcare Applications*, Wiley, Accepted in July 2020.
 - **Singh, Vibhav Prakash**, and Rajeev Srivastava. "Improved Content-Based Image Classification Using a Random Forest Classifier." In *Advances in Computer and Computational Sciences*, pp. 365-376. Springer, Singapore, 2018.
 - Kalita, Dhruva Jyoti, **Vibhav Prakash Singh**, and Vinay Kumar. "A Survey on SVM Hyper-Parameters Optimization Techniques." In *Social Networking and Computational Intelligence*, pp. 243-256. Springer, Singapore, 2020.
 - Kalita, Dhruva Jyoti, **Vibhav Prakash Singh**, and Vinay Kumar. "SVM Hyper-Parameters Optimization using Multi-PSO for Intrusion Detection." In *Social Networking and Computational Intelligence*, pp. 227-241. Springer, Singapore, 2020.
 - **Vibhav Prakash Singh**, "Data Mining Approaches for Classifying Gene Expression Data of Cancer", ISBN Number: 978-3-659-39144-6, LAP LAMBERT Publishing Saarbrucken Deutschland, Germany.
 - **Vibhav Prakash Singh**, and Navneet Solanki, "IT Infrastructure & Its Management", ISBN Number: 978-93-81126-52-3, First Edition 2012, at Nandani Prakashan Pvt. Ltd., New Delhi.
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Conferences:

- Chakrapani, **Vibhav Prakash Singh** and Dhurba Jyoti Kalita, “Chronic Kidney Disease Detection Using Random Forests and Eigenvectors Based Feature Selection”, Accepted and Presented in International Conference (AISCC-2020), Springer, MNIT Jaipur.
- Kumar, Abhishek, Dhurba Jyoti Kalita, and **Vibhav Prakash Singh**. "A Modern Pothole Detection technique using Deep Learning." In *2nd International Conference on Data, Engineering and Applications (IDEA)*, pp. 1-5. IEEE, 2020.
- Ashish Ranjan, **Vibhav Prakash Singh**, AK Singh, and RB Mishra, “Sentential Negation Identification of fMRI Data Using k-NN”, Springer International Conference: MISS-2020, 24-25, September, 2020.
- **Vibhav Prakash Singh** and Dhurba Jyoti Kalita, “Classifying Gene Expression of Data of Cancer Using Multistage Ensemble of Neural Network”, in ICACSE-2019 at KNIT Sultanpur, held on 8-9th Feb, 2019 Published by *Elsevier SSRN*.
- **Vibhav Prakash Singh** and Rajeev Srivastava, Improved image retrieval using color-invariant moments, 2017 3rd International Conference on Computational Intelligence & Communication Technology (CICT), Pages: 1 – 6. IEEE, 9-10, Feb-2017.
- **Vibhav Prakash Singh***; Devang Kulshreshtha*; Ayush Srivastava; Rajeev Srivastava, Content-based mammogram retrieval using k-means clustering and local binary pattern, 2017 2nd International Conference on Image, Vision and Computing (ICIVC), Pages: 634 – 638, Chedgu, China, IEEE, 2-4, June-2017.
- Ayush Shrivastava, Arpit Chaudhary, Devang Kulshreshtha, **Vibhav Prakash Singh**, and Rajeev Srivastava, “Automated digital mammogram segmentation using Dispersed Region Growing and Sliding Window Algorithm”, 2017 2nd International Conference on Image, Vision and Computing, 2017, Pages: 366 – 370, China, IEEE, 2-4 June-2017.
- **Vibhav Prakash Singh**, Shivoam Malhotra, and Rajeev Srivastava. "Combining hybrid information descriptors and DCT for improved CBIR performance." In *Control, Computing, Communication and Materials (ICCCCM)*, 2016 International Conference on, pp. 1-5. IEEE, 21-22, Oct-2016.
- **Vibhav Prakash Singh**, Ashim Gupta, Shubham Singh, and Rajeev Srivastava. "An efficient content based image retrieval for normal and abnormal mammograms." In *2015 IEEE UP Section Conference on Electrical Computer and Electronics (UPCON)*, pp. 1-6. IEEE, 4-6, Dec-2015.
- **Vibhav Prakash Singh**, and Rajeev Srivastava. "Design & performance analysis of content based image retrieval system based on image classification using various feature sets." In *Futuristic Trends on Computational Analysis and Knowledge Management (ABLAZE)*, 2015 International Conference on, pp. 664-670. IEEE, 25-27, Feb-2015.
- Prateek Prince Thakur, Devang Kulshreshtha, **Vibhav Prakash Singh**, and Rajeev Srivastava, “Convolutional Neural Networks for 3D Brain MRI Classification”, in International Conference on Recent Advance in Engineering and Technology (ICRET-18), 7th April`2018 Bangkok.
- Arpit Chaudhary, Prince Thakur, **Vibhav Prakash Singh** and Rajeev Srivastava, “An Efficient Approach for Image Retrieval Based on X-OR Distance Using Binary Hash Codes”, in International Conference on Recent Advance in Engineering and Technology, 7th April -2018 Bangkok.
- **Vibhav Prakash Singh**, Rajeev Srivastava, and Neeraj Kumar “Multistage Ensemble Classification for Gene Expression Data of Cancer Using Correlated Informative

Features”, International Conference on Communications, (ICRCWIP 2015), POORNIMA UNIVERSITY- Jaipur, 16-17 Jan-2015.

- **Vibhav Prakash Singh** and Ashu Sharma, Paper published & presented in National Conference of Artificial Intelligence & Agent Application, IIT-BHU, Varanasi on “Correlation Based Gene Selection for Accurate Cancer Classification of Gene Expression Data”, held on 9-10th Dec-2011.
- **Vibhav Prakash Singh** and Achal Tomer, paper published & presented in *AICTE Sponsored* National Conference -Advance in Information & Communication Technology at MITS Gwalior on “Information Security using Color Image Watermarking Using images for transmitting secret information”, held on 28-29 Oct-2013.
- **Vibhav Prakash Singh**: Paper published & presented in National Conference at College of Science & Engineering Jhansi on “How to Measure the Performance of Grid System Which Works as a Parallel System”, held on 30-31 Oct-2010.
- **Vibhav Prakash Singh**, Paper published & presented in National Conference on Trends & Advancement in Computer Science & Engineering at B.S.A College of Engineering & Technology Mathura on” String Matching based correlated feature selection and classification of gene expression data of cancer ”, held on dated 23 March 2013.
- Kriti Singh, Rajeev Srivastava, **Vibhav Prakash Singh** “An Introductory survey on Content Based Image Retrieval”, National Conference on Present Scenario and Future Trends in Biomedical Engineering and Healthcare technologies (*FTBH 2014*), Oct. 17-18, 2014, School of Biomedical Engineering, IIT (BHU), Varanasi, U.P.
- **Vibhav Prakash Singh**, Published and presented poster paper on “Computer Added Diagnosis of Breast Cancer Assisted by Content Based Mammogram Retrieval” at IIT (BHU), Varanasi, April 2-3, 2016.
- Pradeep Koli and **Vibhav Prakash Singh**, Paper accepted on “String Matching based implementation of web crawler”, in the 2011-International Conference on Computer Communication and Management, Sydney, Australia.

Work Experiences:

- Worked as an Assistant Professor (TEQIP-III, World Bank project under NPIU New Delhi) in the Department of Computer Science and Engineering at Gaya College of Engineering, Gaya from 4th January 2018 to 8th June 2019.
- Worked as Teaching Assistant during Ph.D. (28th December-2013 to 3rd January-2018) in the Department of Computer Science and Engineering at IIT (BHU), Varanasi.
- Worked as an Assistant Professor in the Department of Computer Science/Information Technology Department at Anand Engineering College (Sharda University Group) Agra from July 2011 to December 2013.

Professional Activities:

Reviewer:

- IEEE Transaction on Industrial Electronics
- IEEE Transaction on Neural Networks and Learning Systems

- IEEE Transaction on Computational Social Systems
- IEEE Intelligent Systems
- IEEE Access
- Expert Systems with Applications, Elsevier
- Computer Methods and Programs in Biomedicine, Elsevier
- Measurement, Elsevier
- Informatics in Medicine Unlocked-Journal, Elsevier
- Complex & Intelligent Systems, Springer
- Signal, Image and Video Processing, Springer
- Sadhana, Springer
- Multimedia Tools and Application, Springer
- Iranian Journal of Science and Technology, Springer
- International Journal of Imaging Systems and Technology, Wiley
- IETE Journal of Research, Taylor and Francis
- Computers, Materials & Continua, Tech Science Press
- International Journal of Computational Vision and Robotics, Inderscience
- International Journal of Medical Engineering and Informatics, Inderscience
- American Society of Agricultural and Biological Engineers

Session Chair/ Program Committee (International Conferences):

- Jury Member in "Grand Finale of Smart India Hackathon 2020 (Software Edition)" at nodal center Banaras Hindu University, Varanasi from 1st to 3rd August, 2020.
- Session Chair in IEEE-SCES, MNNIT Allahabad
- Session Chair in Machine Vision and Augmented Intelligence (2021), IIITDM, Jabalpur
- Session Chair in International Conference, MISS-2020, Gwalior
- Session Chair in 3rd-International Conference on Advance Computing and Software Engineering-2021 at KNIT, Sultanpur.
- Session Chair in 2nd-International Conference on Advance Computing and Software Engineering-2019 at KNIT, Sultanpur.
- Program Committee member of Sixth International Conference on Communication Systems and Network Technologies, PTU Punjab.
- FRSM-2020, NIT Silchar
- 5th International Conference Information, Communication & Computing Technology , Springer, 2020.
- IDRBT Doctoral Colloquium-2019.

Invited Talks

- Delivered an Expert lecture on “Deep learning applications in computer vision” in a FDP on Computer Science as an Integral Part of Modern Technology Development, Gaya College of Engineering, Gaya.
- Delivered an Expert lecture on “Some interesting use cases for deep learning” in a FDP on Deep Learning and Machine Learning Applications in Computer Vision, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, C.G.

- Delivered an Expert lecture on “ CBIR and Text Analytics” in a ATAL program on Deep Learning and Machine Learning Applications in Computer Vision, Guru Ghasidas Vishwavidyalaya (A Central University), Bilaspur, C.G
- Delivered an Expert lecture on “Computer Vision: An AI Perspective” in a One -Day Webinar organized by Feroze Gandhi Institute of Engineering & Technology, Raebareli, June 8, 2020.
- Delivered an Expert lecture on “Role of Digital Education” Intellectual Basket of Women National Conference 2020 organized by Jayoti Vidyapeeth Women's University, Jaipur at University Virtual Base from June 16 - 21, 2020.

Workshop/Faculty Development Program

- Participated in one-week induction program at IIT Kanpur
- Participated in four days workshop on mathematics in engineering at IIT Bombay
- Participated in two days workshop on OBE Integration at VJTI, Mumbai.
- Participated in one week NBA accreditation program organized by NITTR Kolkata
- Participated in two days workshop for OBE integration and CO-PO mapping at AKU, Patna
- Participated in five days FDP program on research methodology at GCE, Gaya
- Participated in two days workshop on NBA at GCE, Gaya
- Participated in four week FDP program at HITM, Agra
- Participated in two days workshop on Meta Heuristic & IT researchers at IIITM Gwalior
- Participated in one-day workshop on MAT LAB & SIMULINK organized by Math Works.
- Participated in two days workshop on NLP organized by IIT (BHU), Varanasi.

Specialization and Interesting Subjects:

- Image Processing and Computer Vision
 - Medical Image Analysis
 - Data Mining
 - Machine Learning
 - Design & Analysis of Algorithms
 - Computer Graphics
 - Computer Networks
 - Operating System and Advanced Operating System
 - Cryptography & Network Security
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