Dr. Navdeep Singh
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ACADEMIC DETAILS

Degree	Institute	Year	Grade/CGPA/%
Ph.D	Punjabi University, Patiala	2020	A (Grade) in Course Work
M.E	Thapar University, Patiala	2008	8.76 (CGPA)
B.Tech	PTU, Jalandhar	2004	67.3%

PRESENT OCCUPATION

ASSISTANT PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING, PUNJABI UNIVERSITY PATIALA SINCE DEC 2011.

COMPUTER PROFICIENCY

- Programming Languages
    - Python , C, C++, Java, MATLAB
- Operating Systems
    - Windows, Linux
- Visualization
    - Matplotlib, Seaborn
- Computing Environments
    - AWS, Google Colab

ADMINISTRATIVE RESPONSIBILITIES

1. Acted as co-cordinator in the library committee of the department.
2. Acted as convener for star evening for crispolatieia.
3. Acted as a member of technical committee for crispolatieia.
4. Acted as convener for catering and tent committee for the department.
5. Acted as cordinator for 3rd year Btech students.

SUBJECTS TAUGHT TILL DATE AT UG AND PG LEVELS OF ENGINEERING

1. Python Programming
2. Machine Learning
3. Data Structures
4. Algorithm Analysis and Design
5. Operating System
6. DBMS

MEMBER OF PROFESSIONAL BODIES/SOCIETIES

1. Member of Internet Society Chapter.
2. Member of International Computer Science and Engineering Society (ICSES)
3. Member of Society of Digital Information and Wireless Communications (SDIWC)
4. Member of Internation Association of Engineers (IAENG)

NATIONAL/INTERNATIONAL JOURNAL PUBLICATIONS

1. Navdeep Singh, Danish Bansal and Dheeraj Nagpal, "**Deep Learning Based Retinal Vessel Segmentation: A Review**", Advances in Mathematics: Scientific Journal (2020), indexed in Scopus.

2. Harsimratpal Kaur, Navdeep Singh and Lakhwinder Kaur, **"Security Evaluation For SDN based Networks"**, Advances in Mathematics: Scientific Journal (2020), indexed in Scopus.

3. Navdeep Singh, Lakhwinder Kaur and Kuldeep Singh, **"Histogram equalization techniques for enhancement of low radiance retinal images for early detection of diabetic retinopathy"**, International Journal of Engineering Science and Technology, Elsevier (2019), indexed in SCIE (Impact factor of 3.2) and Scopus.

4. Navdeep Singh, Lakhwinder Kaur and Kuldeep Singh, **"Segmentation of retinal blood vessels based on feature-oriented dictionary learning and sparse coding using ensemble classification approach"**, Journal of Medical Imaging, SPIE (2019), indexed in Pubmed, EI and Scopus.

5. Mishal Bansal and Navdeep Singh, **"A Hybrid Technique to Perform Retinal Vessel Enhancement by Contrast Correction and Morphological Operations**

for Segmentation", International Journal of Engineering Research in Computer Science and Engineering, 2018.

6. Roopkamal Kaur and Navdeep Singh, **"Hybrid Scheduling For Virtual Machine Systems In Cloud Computing"**, International Journal for Multi Disciplinary Engineering and Business Management, 2018.

7. Roopkamal Kaur, Navdeep Singh and Gurjit Singh, **"Hybrid Scheduling Algorithm For Performance Enhancement Of VM in Cloud Computing Environment"**, Global Journal Of Engineering Science And Researches, 2018.

8. Harmeet Kaur and Navdeep Singh, **"Comparative Review of Image Denoising and Segmentation Approaches For Detection of Tumor in Brain Images"**, International Journal for Research in Applied Science & Engineering Technology, 2017.

9. Rupinder Kaur and Navdeep Singh, **"A Review of Retinal Vessel Segmentation Techniques"**, International Journal for Research in Applied Science & Engineering Technology, 2017.

10. Shivani Garg and Navdeep Singh, **"MRI Brain Image Quantification Using Wavelets for Tumor Detection"**, International Journal of Mechanical Engineering and Information Technology, 2014.

11. Rupali Sharma and Navdeep Singh, **"An Automatic Approach to Iris Extraction and Recognition"**, International Journal of Emerging Technology and Advanced Engineering, 2014.

NATIONAL/ INTERNATIONAL CONFERENCES ATTENDED

1. **Facial Micro-Expression Recognition** in the proceedings of National Conference on Wireless Communication and Mathematics organized by Guru Kashi College, Punjabi University, Talwandi Sabo, India, 2019.

2. **Retinal Vessel Segmentation** in International Conference on Intelligent Machines (ICIM) organized by Baba Farid College of Engineering and Technology, Bathinda, India, 2019.

3. **Image Denoising And Segmentation Approaches For Detection Of Tumour In Brain Images** in the proceedings of International Conference on New Frontiers

of Engineering, Science, Management and Humanities (ICNFESMH) conducted by IETE Delhi, India, 2017.

4. **Comparative Analysis of the Image Enhancement Techniques** in the proceedings of International Conference on Inventive Computation Technologies (ICICT) organized by RVS Technical campus at Coimbatore, India, 2017.

5. **A Survey on Blood Vessel Segmentation Methods in Retinal Images** in the proceedings of International Conference on Electronic Design, Computer Networks and Auromated Verification-EDCAV organised by National Institute of Technology, Meghalaya, 2015.

RESEARCH AND DEVELOPMENT ACTIVITIES

M.Tech Thesis Guided

Sno	Name of Student	Year of Completion	Title of Thesis
1	Indu Sharma	2012	Images and Image URLs Securing Portals
2	Karamjeet Kaur	2013	Genetic algorithm based detection of malicious activities in the network
3	Amandeep Singh	2013	Optimized packet filtering honeypot with intrusion detection system for WLAN
4	Shivani Garg	2014	Segmentation based quantification approach of an MRI brain image
5	Sandeep Kaur	2014	Denoising of images using discrete wavelet transform
6	Rupali Sharma	2014	An automatic approach to iris extraction and recognition
7	Nancy Goyal	2014	Content based image retrieval using bacteria foraging method and KFCM
8	Samandeep Kaur	2015	Automatic license plate identification of vehicles
9	Maninderjeet Kaur	2016	Image enhancement of low exposure underwater images using contrast correction
10	Shilpa	2016	A hybrid approach to feature extraction for content based image retrieval
11	Mishal Bansal	2018	Development of an enhancement technique for accuarate segmentation of blood vessels
12	Nidhi	2017	Comparative analysis of the image enhancement techniques

13	Rupinder Kaur	2017	Automatic detection of vascular bifercations in segmented retinal images using trainable cosfire filters
14	Harmeet Kaur	2017	Image denoising and segmentation approaches for detection of tumour in brain images
15	Roopkamal Kaur	2018	Hybrid scheduling algorithm for performance enhancement of VM in cloud computing environment

AREAS OF INTEREST, EXPERTISE AND CURRENT RESEARCH

1. Machine Learning
2. Deep Learning
3. Medical Imaging
4. Image Processing
5. Natural Language Processing

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