RESUME

Dr. Preeti Sharma

Assistant Professor
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Google Scholar: https://scholar.google.com/citations?hl=en&user=_wZBsC8AAAAJ
Location: Dehradun, Uttarakhand, India

Career Objective

Dedicated and results-driven professional with extensive teaching, research, and mentoring experience. Specialized in cutting-edge fields like Generative Adversarial Networks, Digital Forensics, and Deep Neural Networks. Seeking opportunities to leverage expertise in R&D and collaborative teamwork to achieve organizational success and societal impact.

Professional Qualifications

- Ph.D. (Computer Science and Engineering), University of Petroleum and Energy Studies, Dehradun.
- M.Tech. (Computer Science and Engineering), Uttarakhand Technical University (**Gold Medalist, 85%**).
- M.C.A. (Masters in Computer Applications), M.D.U. (Campus), Rohtak (82%).

Research Publications

- 1. Sharma, P., Kumar, M., Sharma, H.K. et al. Generative adversarial networks (GANs): Introduction, Taxonomy, Variants, Limitations, and Applications. Multimed Tools Appl (2024). https://doi.org/10.1007/s11042-024-18767-y.

- P. Sharma, M. Kumar, and H. K. Sharma, "Robust GAN-Based CNN Model as Generative AI Application for Deepfake Detection", EAI Endorsed Trans IoT, vol. 10, Apr. 2024.

- Sharma, Preeti, Manoj Kumar, and Hitesh Kumar Sharma. "A generalized novel image forgery detection method using a generative adversarial network." Multimedia Tools and Applications (2023): 1-32.

- Sharma, Preeti, Kumar, M., & Sharma, H. K. (2023). A GAN-based model of deepfake detection in social media. Procedia Computer Science, 218, 2153-2162.

- Sharma, Preeti, Manoj Kumar, and Hitesh Sharma. "Comprehensive analyses of image forgery detection methods from traditional to deep learning approaches: an evaluation." Multimedia Tools and Applications 82.12 (2023): 18117-18150.
- A research paper entitled "Ensemble WGAN(EWG): Advancing image synthesis and deep fake detection with heterogeneous discriminator Approach" is submitted in the journal "Computology: Journal of Applied Computer Science and Intelligent Technologies".
- Sharma, Preeti, Manoj Kumar, and Hitesh Kumar Sharma. "A Guide to Digital Forensic"Theoretical to Software-Based Investigations"." Perspectives on Ethical Hacking and Penetration Testing. IGI Global, 2023. 1-30.
- Research paper titled "CNN-based Facial Expression Recognition System Using Deep Learning Approach" published in "Conference on Computational Intelligence and Information Retrieval CIIR", 2021.

- Real Time Tracking System for Object Tracking using the Internet of Things (IoT) published in "Conference on Computational Intelligence and Information Retrieval CIIR",2021.
- Research Paper titled as "Leach and Improved Leach: A Review" publish in "International journal of Advanced research in computer science" Vol 10, 2019.

Conference Presentations

- "An Extensive Analysis of Satellite Imagery for Deepfake Detection" presented in 2nd Global Congress on advanced Satellite Communications" ,London,UK on October 17 2024.
- "Intelligent Crop Management System for Precision Agriculture" presented in "IEEE CIS Workshop on Innovation & Leadership in Artificial Intelligence" organized by IIT Indore on 16 October 2024.
- "Systematic Exploration of GAN-Generated Image Recognition Techniques" in IEEE International Conference on Signal Processing and Advance Research in Computing, SPARC-2024" organized by Amity University ,Lucknow , Uttarpradesh on 12-13 september 2024.
- "Implementation of Attention Mechanism in GAN for the Purpose of Quality Detection" in the 5th IEEE International Conference on Computing, Power and Communication Technologies IC2PCT-2024 organized by Galgotias University, Greater Noida, Uttar Pradesh, India on 9th & 10th February 2024.
- "Generative Deep Learning-Based Unsupervised Multi-scale Method for Denoising and Producing High-Definition Images," 12th International Conference on Soft Computing, Artificial Intelligence, and Applications (SCAI 2023), Sydney, Australia.
- "Robust GAN-Based CNN Model as Generative AI Application for Deepfake Detection," EAI MALDA 2023, European International Conference in Deep Learning and Applied Data Analytics.
- "GAN-CNN Ensemble: A Robust Deepfake Detection Model of Social Media Images Using Minimized Catastrophic Forgetting and Generative Replay Technique," ICMLDE-2, 2023, International Conference on Machine Learning and Data Engineering.

Patents

1. Deepfakes Detection Model for Face Forgeries Generated by Generic GAN in Social Media – Application No. 202211025661.
2. Performance Analysis of LEACH and Improved LEACH Protocol for Energy-efficient Wireless Networks – Application No. 202211010388.

Professional Experience(Above 10 years)

Assistant Professor, School of Computing, DIT University, Dehradun | July 2024 – Present

- Delivered courses on advanced AI and machine learning topics.
- Guided students in academic projects and research publications.

Junior Research Fellow, UPES, Dehradun | April 2021 – June 2024

- Developed ensemble GAN models for deepfake detection and published research in top-tier journals.

Teaching Assistant, UPES, Dehradun | 2021 – June 2024
- Conducted practical labs and tutorials in data analytics and AI modules.

Non-Teaching Staff, UPES, Dehradun | September 2015 – March 2021
- Contributed to the technical management of academic departments.

Certifications

- Best Oral Presentation Award, IYRC-2024, UPES.
- Certified in Machine Learning with Python by Cognixia, 2023.
- Certification on Writing Research Articles, Research 4.0 Workshop, 2021.

Technical Skills

- Programming Languages: Python, MATLAB, Core Java, C++, C.
- Tools: Anaconda, ARCGIS, SQLServer, Erdas, Oracle.
- Specializations: Generative Adversarial Networks, Image Processing, Digital Forensics.

Achievements and Leadership

- Conference Coordinator and Reviewer for ICMLDE 2023 & 2024.
- Winner of Creative Writing Competition, OREGON-07 IT FEST.
- Course Coordinator, M.tech (AI and KR),DIT University ,B.Tech (Geoinformatics), UPES.

Personal Information

- Nationality: Indian
- Marital Status: Married
- Languages: English, Hindi

Strengths

Diligence, Integrity, and Sincerity.
Collaborative Team Player with Problem-solving Abilities.
Proactive Adaptability to Varied Situations.

Hobbies

Exploring New Research, Reading, and Listening to Music.

Declaration: I am confident that my unique blend of skills and experiences align perfectly with the requirements of your esteemed organization, offering mutual growth opportunities.

Date: PREETI SHARMA