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| **CONTACT ME AT**   |  |  | | --- | --- | |  | [jainrahul52@gmail.com](mailto:jainrahul52@gmail.com) | |  | +91 8923501991 |   **EDUCATION**   |  |  | | --- | --- | |  | **Ph.D. in Artificial**  **Intelligence,** National  Institute of Technology,  Silchar, 2024 | |  | **M.Tech. in Signal Processing**  **& Control,** National Institute  ofTechnology, Hamirpur,  2012 | |  | **B.Tech. in Electronics &**  **Communication Engineering**, GLA Institute of Technology &  Management, Mathura, 2009 |   **SOFT SKILLS**  **CORE COMPETENCIES**  **TECHNICAL SKILLS**    **CERTIFICATIONS**   |  |  | | --- | --- | |  | Python for Computer Vision with OpenCV and Deep Learning  Udemy |   **PROJECTS**   * Dynamic Hand Gesture Recognition using Deep Learning Techniques * Sign Language Recognition System * Object Detection in Videos using Pre-Trained Models   **PERSONAL DETAILS**   |  |  | | --- | --- | | **Address:** | 58/25 Raj Shree  Bhawan, Agra  Road, Tundla,  Firozabad, U.P.,  India, 283204 | | **Date of Birth:** | 11th July 1987 | | **Languages:** | Hindi, English | | **RAHUL JAIN**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | [**ORCID**](http://ORCID:%200000-0003-489/) |  | [**Google Scholar**](https://scholar.google.com/citations?user=sYAF7q4AAAAJhl=en/) |  | [**LikedIn**](https://www.linkedin.com/in/rahul-jain-0a3438249/) |   **PROFILE OBJECTIVE**  **Driven by a passion for advancing research and education, I aim to secure a role in R&D, contributing innovative solutions to challenges in AI, deep learning, and computer vision. Additionally, I seek opportunities in academia to inspire scholars and advance knowledge in my field.**  **PERSONAL PROFILE**   * **Ph.D. in Artificial Intelligence** specializing in dynamic hand gesture recognition. Known for pioneering research **driving advancements** in video a**nalysis** and human-computer interaction through innovative deep learning techniques. * Experienced Assistant Professor with a **focus on R&D** in image processing, signal analysis, and related domains. Skilled in **curriculum development, instructional** **delivery, and project supervision**, fostering an environment conducive to **innovation and discovery.** * Recognized for **developing novel algorithms** for dynamic hand gesture recognition, enhancing accuracy significantly. Proficient in **leveraging deep learning architectures** and pre-trained models for advanced object detection and analysis in video datasets. * Published extensively in prestigious journals and recipient of the Best Paper Award at IEEE conferences. Committed to **driving R&D forward** through visionary thinking and impactful contributions to gesture recognition and computer vision. * Equipped with a diverse technical skill set including Python, TensorFlow, and MATLAB. Demonstrates **strong leadership** **and strategic thinking, fostering collaboration** and **driving meaningful advancements** in AI and deep learning research.   **WORK EXPERIENCE**  **Assistant Professor |University of Petroleum and Energy Studies| Jan 2025- Present**  *Instruction in Deep Learning, Python, Discrete Mathematics and more*  **Summary:** Offered comprehensive educational guidance in the fields of Computer Vision, and Deep Learning, fostering a conducive learning environment through structured lectures, tutorials, and practical assessments.  **Junior Scientist | Smartsoc Solutions Private Limited| May2024- Jan2025**   * **Summary:** Developing a real time Driver Drowsiness Detection system using a combination of face detection and time series classification techniques. The system analyzes video to identify drowsy states and issue warnings or alarms to enhance driver safety.   **Research Scholar | National Institute of Technology, Silchar | Jul 2019 – April 2024**  *Conducted Groundbreaking Research in Dynamic Hand Gesture Recognition using Deep Learning Techniques*   * **Summary:** Led cutting-edge research initiatives aimed at advancing video analysis and human-computer interaction through dynamic hand gesture recognition.   **KEY RESULT AREAS:**   * **Model Optimization and Customization:** * Fine-tuned and personalized a range of deep learning architectures, including VGG-16, VGG-19, ResNet-50, ResNet-101, InceptionV3, Xception, and EfficientNet, to attain superior accuracy in gesture classification tasks. * **Enhancing Model Performance:** * Applied ensemble learning methodologies and attention mechanisms to significantly improve the accuracy and robustness of deep learning models, underscoring a dedicated commitment to advancing model efficacy. * **Architectural Design Proficiency:** * Developed a sophisticated two-level architecture tailored for concurrent gesture detection and classification within video streams, demonstrating a profound understanding of intricate architectural design principles. * **Integration of Pre-Trained Models:** * Leveraged pre-trained models such as Faster R-CNN and SSD from the TensorFlow API for seamless object detection within video datasets, showcasing proficiency in incorporating state-of-the-art tools for enhanced analysis capabilities.   **Assistant Professor | Hindustan College of Science, Mathura | Jul 2012 - Jul 2019**  *Instruction in Image Processing, Signal & System, and More*  **Summary:** Offered comprehensive educational guidance in the fields of Image Processing, Signal & System, and related disciplines, fostering a conducive learning environment through structured lectures, tutorials, and practical assessments.  **Key Contributions:**   * **Curriculum Development and Delivery:**   Developed and delivered meticulously structured lectures, tutorials, and assessments to facilitate in-depth understanding of Image Processing, Signal & System, and associated subjects.   * **Project Guidance and Supervision:**   Provided mentorship and supervision for image processing projects, bridging theoretical knowledge with real-world applications to enhance students' practical proficiency.   * **Effective Knowledge Transfer:**   Ensured effective knowledge transfer through engaging instructional methodologies, fostering student engagement and participation in lectures and tutorials.   * **Practical Application of Concepts:**   Established expertise in the practical application of theoretical concepts, enabling students to comprehend and apply fundamental principles in diverse contexts.   * **Positive Feedback and Student Success:**   Received positive feedback for cultivating an enriching learning atmosphere conducive to student success and academic growth.   * **Project Guidance and Skill Development:**   Guided numerous successful image processing projects, contributing significantly to students' comprehension and skill development in the field.  **AWARDS AND RECOGNITION**   * Authored 7 articles published in high-impact Science Citation Index (SCI) journals, effectively contributing to the advancement of knowledge in the fields of gesture recognition and computer vision. * Received the Best Paper Award for the paper titled "Face Recognition Using Computational Efficient Algorithms" at the 2020 4th International Conference on Electronics, Materials Engineering & Nano-Technology (IEMENTech), IEEE, in recognition of exceptional contributions to the field. * Pioneered the development and implementation of novel algorithms, such as encoded motion image and LMI with ensemble learning, for dynamic hand gesture recognition. These innovations resulted in a 2% and 3% enhancement in accuracy compared to previous methodologies, underscoring a steadfast commitment to advancing the frontiers of computer vision research. * Established strong academic and technical know-how by qualifying the GATE-2010 examination. * Successfully completed an eight-day Faculty Development Program focusing on "Universal Human Values and Professional Ethics." * Attained the 3rd position in a chess competition held at NIT Hamirpur, showcasing skilled strategic thinking and competitive skills. * Spearheaded a victorious team in both the Master Premier League and NIT Premier League competitions hosted at NIT Silchar, highlighting exceptional teamwork and leadership capabilities. * Actively organized and participated in numerous workshops and conferences, further enriching knowledge and fostering professional growth. |