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********** CALL FOR PAPERS **********

SPECIAL SESSION ON

Advancements in Computer Vision and Pattern Recognition: Enabling Intelligent Perception

SESSION ORGANIZERS:

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EDITORIAL BOARD: (optional)

Will update you once it is approved

SESSION DESCRIPTION:

The "Advancements in Computer Vision and Pattern Recognition: Enabling Intelligent Perception" special session aims to explore the latest breakthroughs and innovations in the fields of computer vision and pattern recognition. This session will provide a platform for researchers, experts, and industry practitioners to present their cutting-edge research, share insights, and discuss emerging trends that are shaping the future of intelligent perception.

Overview:

Computer vision and pattern recognition have witnessed rapid advancements, driven by the convergence of powerful algorithms, deep learning techniques, and the availability of large-scale datasets. From image and video analysis to object detection, recognition, and scene understanding, computer vision is transforming various industries, including healthcare, autonomous systems, robotics, surveillance, and more. Pattern recognition, on the other hand, is enabling machines to identify complex patterns and make data-driven decisions, revolutionizing applications across diverse domains.

RECOMMENDED TOPICS:

- **Deep Learning for Computer Vision:** Explore the impact of deep neural networks in computer vision tasks, including image classification, object detection, semantic segmentation, and generative models.

- **3D Computer Vision:** Discuss advancements in 3D object recognition, scene reconstruction, and point cloud analysis, with applications in augmented reality, robotics, and medical imaging.

- **Visual Recognition in Healthcare:** Present research on using computer vision for medical image analysis, disease diagnosis, and medical imaging enhancement.

- **Video Understanding and Action Recognition:** Discuss algorithms and techniques for analyzing and understanding video data, including action recognition, activity detection, and video summarization.

- **Explainable AI in Computer Vision:** Address the need for interpretable and explainable models in computer vision applications, focusing on building trust and transparency.

- **Object Tracking and Visual Localization:** Explore the challenges and solutions in object tracking and visual localization, especially in dynamic and complex environments.

- **Face and Emotion Recognition:** Discuss advancements in facial recognition systems, emotion detection, and their applications in security, human-computer interaction, and marketing.

- **Scene Understanding and Semantic Segmentation:** Examine approaches for scene understanding, semantic segmentation, and context-aware computer vision tasks.

- **Pattern Recognition in Natural Language Processing:** Investigate the intersection of pattern recognition and natural language processing, including text classification, sentiment analysis, and named entity recognition.

- **Deep Generative Models for Vision:** Present research on generative adversarial networks (GANs), variational autoencoders (VAEs), and their applications in generating realistic images and data synthesis.

- **Transfer Learning and Domain Adaptation in Computer Vision:** Discuss techniques to transfer knowledge and adapt models across different visual domains and tasks.

- **Multimodal and Cross-Modal Learning:** Explore the fusion of information from multiple modalities, such as text, image, and audio, for enhanced pattern recognition and computer vision tasks.

- **Robotics and Perception:** Discuss how computer vision enables robots to perceive and interact with their environments, enabling autonomous navigation, object manipulation, and human-robot collaboration.

- **Ethical Considerations in Computer Vision:** Address the ethical challenges related to privacy, bias, and fairness in computer vision applications and data collection.

SUBMISSION PROCEDURE:

Researchers and practitioners are invited to submit papers for this special theme session on **Advancements in Computer Vision and Pattern Recognition: Enabling Intelligent Perception**. All submissions must be original and may not be under review by another publication. INTERESTED AUTHORS SHOULD CONSULT THE CONFERENCE'S GUIDELINES FOR MANUSCRIPT SUBMISSIONS at https://cmt3.research.microsoft.com/ICCCN2023. All submitted papers will be reviewed on a double-blind, peer review basis.

NOTE: While submitting paper in this special session, please specify at the top (above paper title) of the first page of your paper.

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