

ICMLDE2022 Special Session Proposal

Special Session on: *Machine Learning in Computer Vision: Applications and Use Cases*

Machine learning and deep learning have transformed computer vision and image processing in recent years. Computer vision provides machines with a perception of sight. Computers can derive meaningful information using computer vision applications and algorithms, coupled with machine learning and deep learning techniques. The usual assets used to gain knowledge are digital images, videos, and other visual inputs that help make recommendations or take actions. Computer Vision gives the machines the sense of sight—it allows them to “see” and explore the world thanks to Machine Learning and Deep Learning algorithms. Deep learning models have demonstrated great success in dealing with complex computer vision tasks. With on-going research and refinement in AI technologies, computer vision applications in the industry see enormous potential. Therefore, we proposed a special session entitled “Machine Learning in Computer Vision: Applications and Use Cases” and expecting to find some exciting research articles in computer vision real-world applications and use cases.

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This session also aims to provide a platform to present and discuss recent advances in computer vision using machine learning methods.

Topics of Interest: The topics should be in the scope of the conference:

- **Topic 1:** Automotive Industry, Self-driving cars, Pedestrian detection, Parking occupancy detection, Traffic flow analysis, Road condition monitoring.
- **Topic 2:** Bioinformatics and Healthcare, CT and MRI, Cancer detection, Digital pathology, Blood loss measurement, Heart disease, and Brain tumour classification.
- **Topic 3:** Movement analysis, Defect inspection, Reading text and barcodes, Product assembly, Predictive maintenance.
- **Topic 4:** Agriculture, Enhancing agricultural crop yield prediction, Automatic weeding, Insect detection, Livestock health monitoring, Plant disease detection, Aerial survey and imaging, irrigation management.
- **Topic 5:** Self-checkout, Automatic replenishment, Intelligent video analytics, Foot traffic and people counting.
- **Topic 6:** Hybrid clustering techniques, Data stream clustering, Classification/regression and Ensemble learning models.
- **Topic 7:** Image segmentation, Feature selection, Object detection and recognition, Image retrieval, Prediction, Facial expression recognition, Age estimation, Human action recognition, Machine translation, Language generation and speech recognition.

Session committee member’s details

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