

Title of the Course	STC ON "OPENCV FOR IMAGE AND VIDEO PROCESSING APPLICATIONS"
TAC No	ICT-34
Dates and Venue	12 - 16 October 2026, NITTTR, Chandigarh
Course Contents	• Essentials of Computer Vision and OpenCV • OpenCV Demonstration and Environment Setup • OpenCV in Pattern Learning • Face and Object Detection using OpenCV • Color Models, Shape and Contour Detection, Filters and Morphological Operations • Medical Image Analysis and Processing using OpenCV • OpenCV Applications in Agriculture and Allied Fields • Video Segmentation for Computer Vision Applications • Shot Boundary Detection in Video • Vision AI: Deep Learning for Image Classification and Object Detection • From Edges to Objects: Feature Detection and Shape Analysis • Industrial Vision Applications using OpenCV • Face Recognition, Facial Landmark Detection, and Emotion Analysis using OpenCV
Course Outcomes:	Participants will be able to: • Understand the fundamentals of computer vision and set up and use the OpenCV framework for image and video processing tasks. • Apply OpenCV-based techniques for face and object detection, color model transformations, shape and contour detection, filtering, and morphological operations. • Develop OpenCV and deep-learning based solutions for image classification, object detection, feature detection, and shape analysis. • Apply computer vision techniques for domain-specific applications • Design and implement video processing solutions involving shot boundary detection and video segmentation, and build face recognition, facial landmark detection, and emotion analysis systems using OpenCV.
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