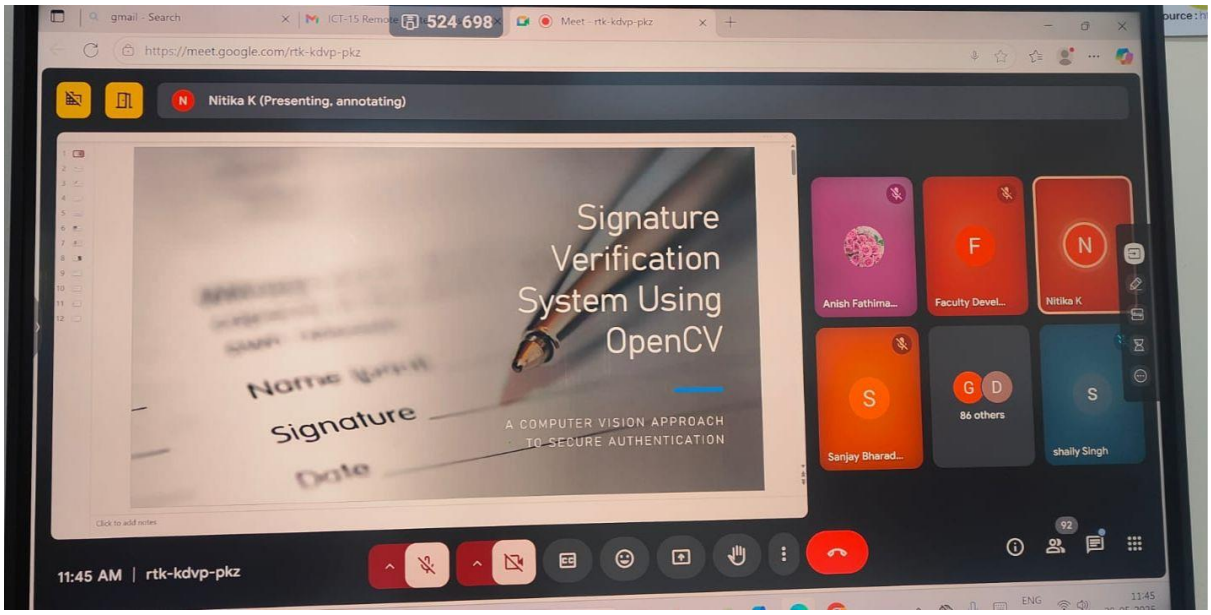
Title: One-Week FDP on “Computer Vision Applications using OpenCV”

Organizer: Computer Science & Engineering Department (1st Shift), hosted by NITTTR, Chandigarh
Dates: 26 – 30 May 2025
Venue: CSE Department, Lab -106B
Participants: 32 faculty members

The purpose of this Faculty Development Program (FDP) was to equip faculty members with hands-on knowledge and advanced techniques in computer vision using OpenCV. Hosted by the Computer Science & Engineering Department (1st shift) and facilitated by experts from NITTTR, Chandigarh, the program aimed to enhance teaching and research capabilities in image and video analysis. On Day 1 Mr. Upendra Kumar Tiwari started with discussion on basics of OpenCV & Python in which Participants acquired essential skills in setting up OpenCV environments, handling image data, and performing elementary operations and also the foundation for subsequent modules. He also discussed about Haar Cascade and how to use it to adapt classifiers for specific use cases. Dr. Jagriti Saini gave insights of Shi Tomasi corner discussion. Day 2 started with discussion on Feature Detection & Matching during which Keypoint detectors (such as SIFT, SURF, ORB), descriptor extraction, and matching techniques were applied to real images, enabling course instructors to enrich their teaching modules. Ms. Niharika K. gave insights of Signature Verification sytem using OpenCV. Faculty learned to detect document tampering and verify handwritten signatures using image processing—a critical application in forensic and verification systems.



On Day 3 Ms. Jyotsana Bodapati discussed on document forgery detection using OpenCV. Apart from this OpenCV for industrial Quality Control: Automated defect detection in manufacturing was also conversed about. Day 4 started with Building AI models with Low-code platforms for vision Applications by Mr. Gagan Deep. Face detection, Recognition and Explainable AI applications were also discussed.

On day 5 Object Tracking by Color using OpenCV was discussed along with Advanced Image Processing Operations like Edge, contour, color detection, Morphological operations using OpenCV.

The FDP ended with Online Quiz, feedback session and valedictory session. All the speakers were very interactive and shared their knowledge with suitable examples.

Dr. Shaily Malik
Local Coordinator

Dr. Geetika Dhand
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