



J.B. INSTITUTE OF ENGINEERING AND TECHNOLOGY (UGC AUTONOMOUS)

(Accredited by NBA&NAAC, Approved by AICTE & Permanently Affiliated to JNTUH Hyderabad)

Yenkapally (Vi), Moinabad (M). P.O. Himayat Nagar, RR District, Hyderabad 500075
Department of Electronics and Computer Engineering



Value-Added Course on Computer Vision

Report

Module Number: 05

Key Topics Covered:

Geometric Transformations Translation, rotation, affine & perspective transforms

Resource Person(s): Mrs. Anusha Manda and Mr. Bheemana Bhuvan

Date and Time of Session: 10.11.2025 and 10.00am to 1.00pm **Duration:** 3 hours

Mode of Delivery: Face to Face Lecture Delivery

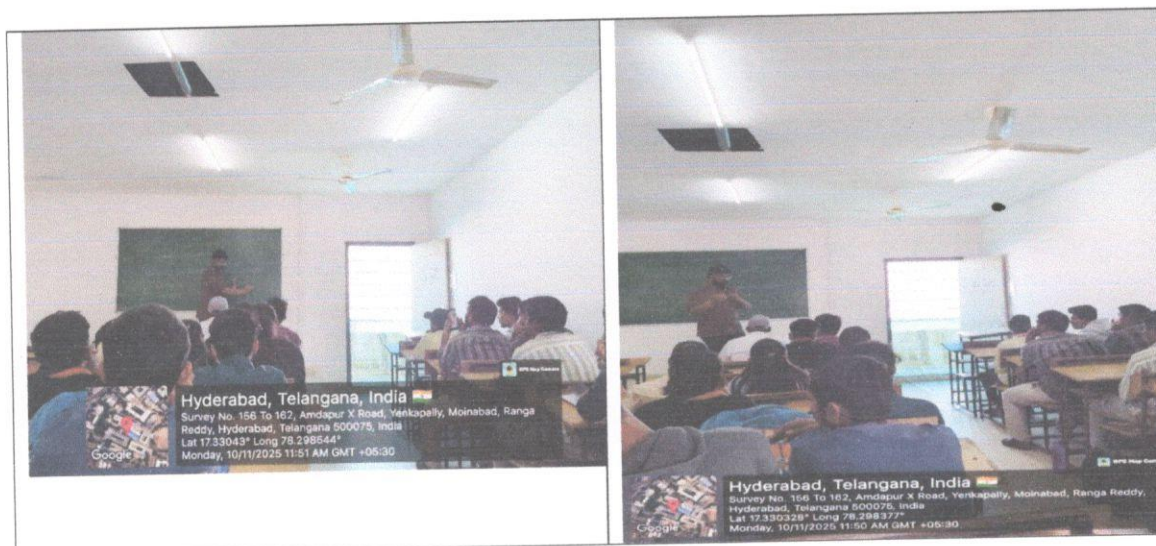
Target Audience: 2nd 3rd and 4th year students

Number of Participants: 55

Venue: A-403 Classroom

Objectives of the Course Module:

- To comprehend how geometric transformations modify the position, orientation, and scale of objects in a coordinate system
- learning how to shift or move objects from one location to another in 2D or 3D space using translation vectors and matrices
- understanding how to rotate objects around a fixed point, origin, or arbitrary axis, and to derive the corresponding rotation matrices



Session conducted on a Value-Added Course on Computer Vision for 2nd, 3rd and 4th year students of ECM on 10.11.2025



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Expected Learning Outcomes of the Module: 5

By the end of the module, students could:

- Explain the fundamental principles of translation, rotation, affine, and perspective transformations
- Representing these transformations using matrix operations
- Apply the transformations to images and geometric objects in practical applications
- Analyze the effects of different transformations on object geometry and viewing perspective

Summary:

Students appreciated the practical, project-based learning approach; clear explanations with industry relevance and real-time demonstrations and coding practice


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