



Course Weekly Outline

Course Name: Computer Vision

Course Instructor					
E-mail					
Title					
Course Coordinator					
Course Objective	<p>Understand the fundamental concepts and techniques of computer vision.</p> <p>Learn about various image and video processing algorithms used in computer vision.</p> <p>Acquire skills in implementing computer vision algorithms and applications.</p> <p>Explore the challenges and applications of computer vision in real-world scenarios.</p>				
Course Description					
Textbook					
References					
Course Assessments	Term Tests	Laboratory	Quizzes	Project	Final Exam
	30%	15%	5%		50%
General Notes					



Course Weekly Outline

Week	Date	Topics Covered	Lab. Experiment Assignments	Notes
1		Introduction to Computer Vision: Definition and scope of computer vision.		
2		Evolution and applications of computer vision. Overview of the computer vision pipeline.		
3		Image Formation and Preprocessing: Image acquisition and representation.		
4		Image enhancement techniques (e.g., filtering, histogram equalization)		
5		Image segmentation and feature extraction.		
6		Image Transformations and Feature Extraction: Geometric transformations (e.g., scaling, rotation, affine transformations)		
7		Feature extraction techniques (e.g., edge detection, texture analysis).		
8		Image Classification and Object Recognition		
9		Supervised and unsupervised learning algorithms for image classification.		
10		Deep learning techniques for object recognition (e.g., convolutional neural networks).		
11		Basics of image tracking and motion estimation. Optical flow algorithms.		
12		Object tracking algorithms (e.g., Kalman filter, particle filter)		
13		3D Computer Vision		
14				
15		Final Exam		

Instructor Signature:

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