



Webinar on Object Detection Using Convolutional Neural Networks (CNN)					
Date: 6 th May 2023					
Time: 2 hours	Resource Person: Prof. Mithun D J				
Number of Participants: 146	Event Coordinators:				
	Dr. Jahnavi M, Prof. Nagasubba Reddy & Prof.				
	Ankitha				

Objectives:

- 1. To introduce participants to the fundamentals of CNN
- 2. To demonstrate how CNN can be adapted and utilized for object detection tasks
- 3. To equip participants with hands-on training on object detection models using CNN

About the Session:

Object detection is a fundamental computer vision task that involves identifying and locating objects of interest within images or videos. Convolutional Neural Networks (CNNs) have emerged as a powerful approach for object detection due to their ability to automatically learn hierarchical features from data. This report explores the concept of object detection using CNNs, the key components of CNN-based object detection systems, popular architectures, evaluation metrics, and real-world applications.

The seminar begins with an introduction to object detection and its significance in various fields, including autonomous vehicles, surveillance, robotics, and more. It explains the challenges of object detection, such as occlusion, scale variation, and complex backgrounds, and sets the stage for how CNNs address these challenges.

The session started with introducing participants to the fundamental of CNN including its architecture, layers, and their role in image processing tasks like object detection. Followed by its importance and the challenges involved in detecting and localizing objects in images. This section provides an overview of CNNs, explaining the architecture and working principles. It covers convolutional layers, pooling layers, and fully connected layers, highlighting how CNNs automatically learn hierarchical representations of features from input images.

The second half of the session concentrated on demonstrating how CNN can be adapted and utilized for object detection tasks with real-time examples.

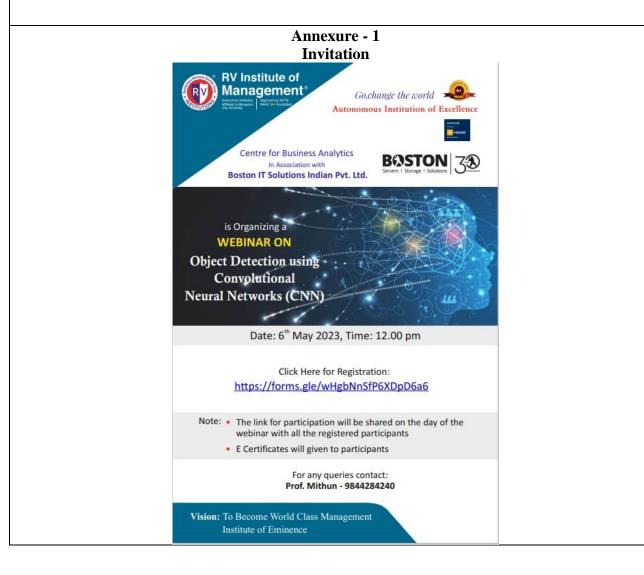
This section focuses on the training process of CNNs for object detection. It explains the importance of large labeled datasets and the use of transfer learning to fine-tune pre-trained models for specific object detection tasks. Techniques like data augmentation and learning rate scheduling are also covered.





Feedback/Coordinators Comment:

The seminar concludes by summarizing the key takeaways from the presentation on object detection using CNNs. It emphasizes the significance of CNNs in revolutionizing object detection tasks and encourages further exploration and innovation in this rapidly evolving field.





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aibilay Sulcai	Student	college of Engineering	76	Prakash P Nair	/ Research Scholar	Pathanamthitta Kerala
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	Dr.M.Parveen	Academician / Research	PSNA College of			Academician	BHARATHIAR
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72	Srivastava	Scholar	University	145	Lavanya k	Scholar	College
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