

## Week 5 Tasks

## **Week 5: Specialized Deep Learning Techniques**

- Object Detection: Implement an object detection model (e.g., YOLO, Faster R-CNN) using Keras or TensorFlow.
- Semantic Segmentation: Create a semantic segmentation model (e.g., U-Net) for image segmentation tasks.
- Reinforcement Learning: Develop a simple reinforcement learning agent using deep Q-learning.
- Graph Neural Networks (GNNs): Implement a GNN for node classification or link prediction tasks.
- Hyperparameter Optimization: Use techniques like grid search and random search to optimize model hyperparameters.





