

1. What is the primary difference between regression and classification tasks in machine learning as applied to computer vision?
 - A. Classification outputs continuous values
 - B. Regression outputs continuous values
 - C. Regression outputs discrete class labels
 - D. Classification requires manual feature definition
2. In the context of feature detection, what is a significant challenge that affects the accuracy of identifying objects in images?
 - A. The number of color channels in an image
 - B. The size of the image
 - C. Variations in scale, orientation, lighting, and occlusions
 - D. The resolution of the image
3. How are color images represented in numerical form for processing in deep learning?
 - A. As 1D arrays
 - B. As 3D arrays with RGB channels
 - C. As 2D arrays
 - D. As binary data
4. What is the primary function of the early layers in a Convolutional Neural Network (CNN)?
 - A. Detect simple features like edges
 - B. Detect complex hierarchical features
 - C. Classify every pixel in an image
 - D. Predict continuous control signals
5. In the context of object detection using CNNs, what is the advantage of using Region Proposal Networks (R-CNN) over the naive sliding window approach?
 - A. It learns to propose regions and classify them end-to-end
 - B. It classifies each box independently
 - C. It requires less computational power
 - D. It simplifies the feature extraction process