Task 2 Convolutional Neural Network

This task is concerned with image classification using a CNN on the CIFAR-10 dataset.

**Main Steps and Concepts:**

Data Preparation:

* The CIFAR-10 image dataset was loaded and normalized by dividing the pixel values by 255.
* Three layers of convolution with ReLU activation followed by max pooling (MaxPooling2D).
* A Dense layer with 64 units with ReLU activation.
* Output layer with 10 units and softmax activation for classification.

Model Compilation:

Compiled with Adam optimizer and categorical cross-entropy loss.

Training and Evaluation:

Trained the model for 10 epochs with validation data.

The performance of the model is evaluated using accuracy and loss on test data.

Insights:

The final test accuracy achieved by the CNN, indicating effective image feature learning.