CodTech Internship Project Report

Title: Deep Learning for Image Classification using CNN

This project presents a functional implementation of a Convolutional Neural Network using TensorFlow and Keras. The model is trained on the CIFAR-10 dataset consisting of 60,000 32x32 color images in 10 classes.

The CNN architecture consists of:

- 3 Convolutional layers
- 2 MaxPooling layers
- 1 Dense hidden layer
- Softmax output layer

The training is visualized through accuracy and loss curves. Model performance is also analyzed via a confusion matrix. The trained model is saved as 'cnn_model.h5' for future use.

This project demonstrates the intern's ability to design, implement, and evaluate a deep learning model and meets the internship deliverable criteria of CodTech.

Prepared by: Rangesh Pandian PT