CIFAR-10 Image Classification — Project Report

A deep learning approach for image classification

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Project Summary

This project focuses on image classification using the CIFAR-10 dataset. The dataset contains 60,000 color images in 10 different classes, with 6,000 images per class. A Convolutional Neural Network (CNN) model was built using TensorFlow and Keras. The mod consists of multiple convolutional layers, max pooling layers, and dense layers. The training process was conducted for 10 epochs, with accuracy and loss recorded for both training and validation datasets. After training, the model was evaluated on a separate test dataset, and predictions were visualized. The classification report provides precision, recall, and F1-score for each class. Sample predictions have been displayed, with correct predictions in green and incorrect ones in red. Overall, the model achieved competitive accuracy on CIFAR-10, demonstrating the effectiveness of CNNs for image classification tasks.

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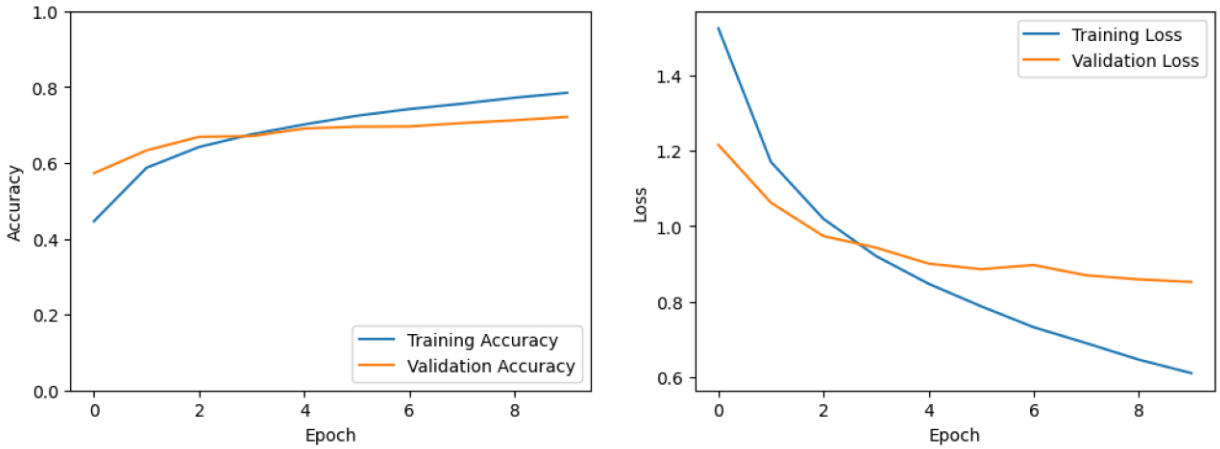

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