

**BATCH NO:** 14

**PROJECT TITLE:** INDIAN COINS RECOGNITION IN TEMPLE OFFERING BOX(HUNDIYAL) USING INCEPTIONV3

**ABSTRACT:**

This project is a novel approach for automating the recognition of Indian coins placed in temple offering boxes (Hundi) using the InceptionV3 convolutional neural network (CNN) architecture. Temple offerings often include coins of various denominations, and manually sorting and counting these coins can be time-consuming and error-prone. The system aims to provide an efficient and accurate solution to this problem. It begins by collecting a dataset of images of Indian coins commonly used in offerings, encompassing different denominations and conditions. These images are then preprocessed to enhance their quality and standardize their appearance, ensuring better performance during training and testing phases. Next, fine-tune the InceptionV3 CNN, a deep learning model pre-trained on the ImageNet dataset, to recognize Indian coins. Fine-tuning involves adapting the network's parameters to better suit the target task of coin recognition in temple offerings. This process involves adjusting the model's weights through backpropagation using the collected dataset. Once the fine-tuning process is complete, Evaluate the performance of the model using various metrics such as accuracy, precision, recall, and F1-score. Additionally, Test the model on a separate validation dataset to assess its generalization ability and robustness to variations in lighting, orientation, and background clutter commonly encountered in real-world scenarios. Finally deploy the trained model to a practical application scenario where it can automatically recognize and classify Indian coins placed in temple offering boxes. This automated system can significantly reduce the manual effort required for sorting and counting offerings, thereby improving efficiency and accuracy while preserving the sanctity of the temple environment. Overall,the proposed approach demonstrates the effectiveness of deep learning techniques, specifically the InceptionV3 architecture,

**Keywords:** Convolution Neural Network, InceptionV3, deep learning, image processing