

CNN Model Architect

Project : Currency Banknote Classification

1. Model Overview

- CNN designed in **Keras/TensorFlow** for classifying **11 banknote classes** from **128×128 RGB images**.
- Architecture includes **Conv2D**, **MaxPooling2D**, **Dense**, **Dropout** layers.
- **Output layer:** Dense with Softmax activation.

2. Model Architecture

1. **Conv2D + ReLU + BatchNormalization** → feature extraction
2. **MaxPooling2D** → dimensionality reduction
3. Repeat Conv2D + MaxPooling layers ($32 \rightarrow 64 \rightarrow 128$ filters)
4. **Flatten** → Dense(256) + Dropout(0.5)
5. **Output layer** → Dense(`num_classes=11`, Softmax)