Course Project Description

General Instructions

- Group size: 6–7 students (maximum).
- Programming language: Python, using Keras inside a Jupyter Notebook.
- Restrictions: You are NOT allowed to use transfer learning or any pre-trained models (e.g., VGG, ResNet, MobileNet, etc.).
  You must build your own CNN architecture from scratch.
- You should prepare your work in a Jupyter Notebook, and it must include:
  - A clear explanation of the problem you selected.
  - A detailed description of your CNN architecture.
  - Training curves: loss and accuracy (plots required).
  - Testing results: confusion matrix and evaluation metrics.
  - Example predictions on unseen/test images.
- Project Options Option 1: Arabic Sign Language ArSL dataset
  - Target Accuracy: at least 95%
- Option 2: Egyptian Money Classification (2023 New Currency)
  - Target Accuracy: at least 93%

Here are some resources that may help you:

1. CNN Model and Its Implementation Using Python
2. Introduction to CNN Keras - 0.997 (top 6%)