

Assignment 1: Hand Gesture Detection in The Rock-Paper-Scissor Game

Embedded Machine Learning for Edge Computing

The deadline to submit is 14th July 2024.

Building a neural network for image classification

The objective of this assignment is to develop a neural network capable of classifying images of hand gestures into three categories: rock, paper, and scissors. This exercise will help you understand the fundamentals of image classification using neural networks and gain hands-on experience with model building, training, and evaluation.

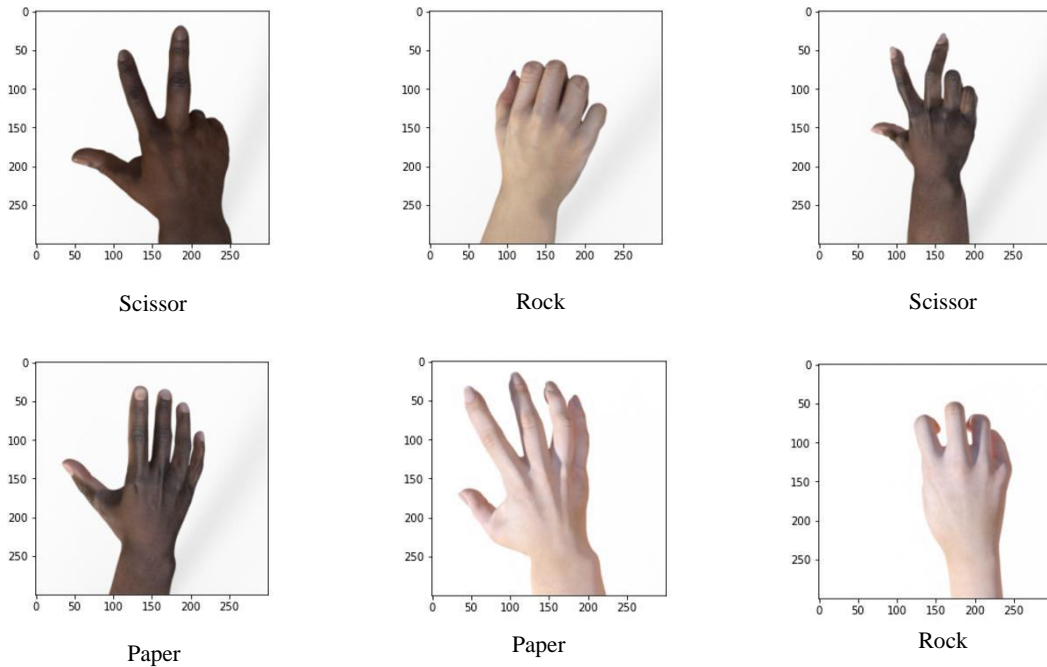


Figure 1: A sample set of images from the dataset

Assignment Description

In this assignment, you will:

1. Load and Explore the Dataset.

2. Preprocess the Data.
3. Build the Neural Network.
4. Train the Model.
5. Evaluate the Model.
6. Make Predictions.

A Colab notebook with the basic structure of the assignment will be provided. You are required to make your own copy of it and complete the code in the sections marked as "FILL".

Instructions

1. **Colab Notebook:** Access the provided Colab notebook here. The notebook contains detailed instructions and code cells with placeholders (marked as "FILL") where you need to complete the code.
2. **Submission:** Once you have completed the assignment, submit your Colab notebook via the provided submission link here.

Deadline

The deadline to submit is 14th July 2024.

Deliverables

- The link to the completed Colab notebook with all "FILL" sections filled.
- The downloaded .ipynb file from file > download > .ipynb.