**Team--NeuroWave**

**Documentation: Running the Body Score Prediction Model**

**Brief Introduction**

This documentation provides detailed instructions on how to set up, configure, and run the code for predicting body scores from animal images. The model is built using TensorFlow and Keras, with a focus on image classification tasks. This guide will walk you through the process of setting up the environment, specifying the paths to the necessary data, and executing the code effectively.

**Prerequisites.**

Before running the code, one should ensure that they have the necessary python environment set up with the required libraries. One can install all dependencies using the requirements.txt file provided. Below are the requirements in that fie;-

tensorflow==2.16.1

keras==3.5.0

scikit-learn==1.2.2

scikeras==0.10.0

pandas

matplotlib

numpy

**Specific Paths to the Data .**

We trained our model using Kaggle notebooks and below I will provide important paths that are used throughout the notebook and their relevancy. So after we cloned our dataset in the notebook, our first directory was at the path below;-

**Image Dataset Directory**:

* Path: **’kaggle/working/body\_score\_dataset’**
* Description: This directory contains all the image files used in the project. The dataset should be cloned from the repository using the command:

!git clone -b body\_scores\_prediction\_dataset https://github.com/MVet-Platform/M-Vet\_Hackathon24.git ./body\_score\_dataset

**Training Data CSV**:

* Path: **’kaggle/working/body\_score\_dataset/train\_data.csv’**
* Description: This CSV file contains the filenames of the images and their corresponding body scores. It is loaded into the DataFrame df\_train\_data using:

df\_train\_data = pd.read\_csv('/kaggle/working/body\_score\_dataset/train\_data.csv')

**Generated File Paths for Images**:

* Path: Generated dynamically based on the image filenames listed in train\_data.csv.
* Description: The filepath column is created in the DataFrame to store the full paths to each image file. This is done using:

df\_train\_data['filepath'] = df\_train\_data.apply(lambda row: glob(f'body\_score\_dataset/\*\*/{row.filename}')[0], axis=1)

**Loading the sample submission file**

Path: '/kaggle/working/body\_score\_dataset/sample\_submission.csv'

This is relevant at the point before creating test dataset because the test dataset must reference whats in the sample submission file. It is done as below;-

**df\_submit = pd.read\_csv('/kaggle/working/body\_score\_dataset/sample\_submission.csv')**