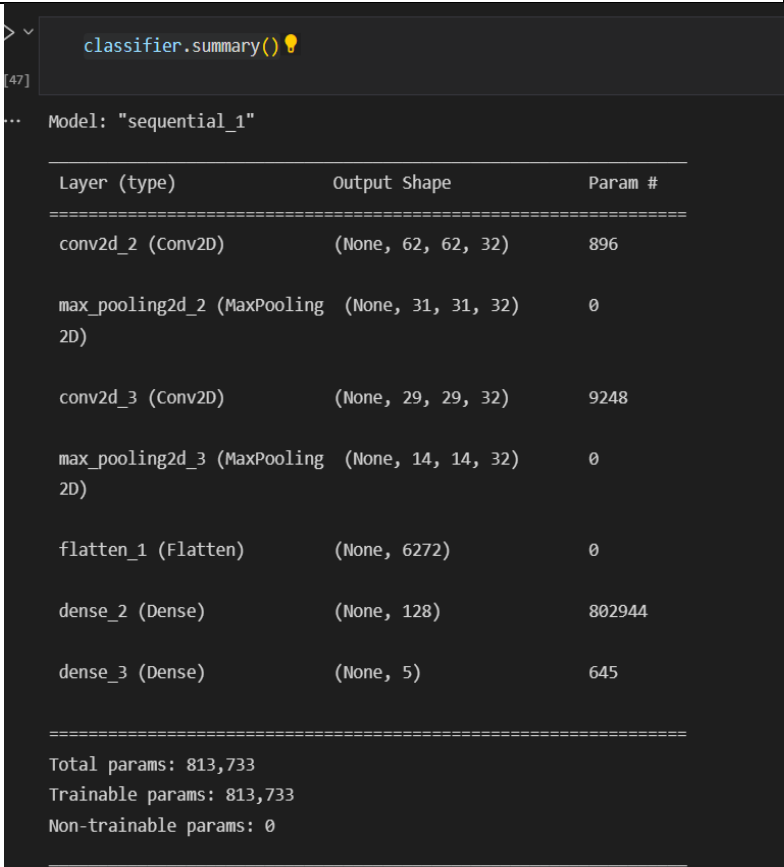


Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID32693
Project Name	Project - AI powered nutrition analyzer for fitness enthusiasts
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.N o.	Parameter	Values	Screenshot
1.	Model Summary	-	 <pre> > classifier.summary() [47] ... Model: "sequential_1" Layer (type) Output Shape Param # ===== conv2d_2 (Conv2D) (None, 62, 62, 32) 896 max_pooling2d_2 (MaxPooling2D) (None, 31, 31, 32) 0 conv2d_3 (Conv2D) (None, 29, 29, 32) 9248 max_pooling2d_3 (MaxPooling2D) (None, 14, 14, 32) 0 flatten_1 (Flatten) (None, 6272) 0 dense_2 (Dense) (None, 128) 802944 dense_3 (Dense) (None, 5) 645 ===== Total params: 813,733 Trainable params: 813,733 Non-trainable params: 0 </pre>

2.	Accuracy	<div>Training Accuracy – 99%</div> <div>Validation Accuracy -99%</div>	<div>797/797 [=====] - 28s 35ms/step - loss: 0.3775 - accuracy: 0.8684 - val_loss: 0.1649 - val_accuracy: 0.9432</div> <div>Epoch 2/40</div> <div>797/797 [=====] - 28s 36ms/step - loss: 0.1901 - accuracy: 0.9319 - val_loss: 0.1209 - val_accuracy: 0.9528</div> <div>Epoch 3/40</div> <div>797/797 [=====] - 28s 36ms/step - loss: 0.1584 - accuracy: 0.9442 - val_loss: 0.0986 - val_accuracy: 0.9621</div> <div>Epoch 4/40</div> <div>797/797 [=====] - 32s 40ms/step - loss: 0.1331 - accuracy: 0.9588 - val_loss: 0.1000 - val_accuracy: 0.9679</div> <div>Epoch 5/40</div> <div>797/797 [=====] - 30s 38ms/step - loss: 0.1344 - accuracy: 0.9555 - val_loss: 0.0814 - val_accuracy: 0.9706</div> <div>Epoch 6/40</div> <div>797/797 [=====] - 35s 44ms/step - loss: 0.1179 - accuracy: 0.9558 - val_loss: 0.0736 - val_accuracy: 0.9721</div> <div>Epoch 7/40</div> <div>797/797 [=====] - 34s 42ms/step - loss: 0.1211 - accuracy: 0.9566 - val_loss: 0.0762 - val_accuracy: 0.9719</div> <div>Epoch 8/40</div> <div>797/797 [=====] - 39s 49ms/step - loss: 0.0961 - accuracy: 0.9618 - val_loss: 0.0696 - val_accuracy: 0.9741</div> <div>Epoch 9/40</div> <div>797/797 [=====] - 33s 41ms/step - loss: 0.0808 - accuracy: 0.9694 - val_loss: 0.0680 - val_accuracy: 0.9749</div> <div>Epoch 10/40</div> <div>797/797 [=====] - 31s 39ms/step - loss: 0.0827 - accuracy: 0.9709 - val_loss: 0.0501 - val_accuracy: 0.9799</div> <div>Epoch 11/40</div> <div>797/797 [=====] - 35s 44ms/step - loss: 0.0734 - accuracy: 0.9734 - val_loss: 0.0458 - val_accuracy: 0.9822</div> <div>Epoch 12/40</div> <div>797/797 [=====] - 34s 43ms/step - loss: 0.0960 - accuracy: 0.9676 - val_loss: 0.0564 - val_accuracy: 0.9807</div> <div>Epoch 13/40</div> <div>797/797 [=====] - 34s 43ms/step - loss: 0.0659 - accuracy: 0.9771 - val_loss: 0.0358 - val_accuracy: 0.9879</div> <div>...</div> <div>Epoch 39/40</div> <div>797/797 [=====] - 26s 33ms/step - loss: 0.0206 - accuracy: 0.9930 - val_loss: 0.0069 - val_accuracy: 0.9980</div> <div>Epoch 40/40</div> <div>797/797 [=====] - 34s 43ms/step - loss: 0.0083 - accuracy: 0.9962 - val_loss: 0.0296 - val_accuracy: 0.9907</div>
3.	Confidence Score (Only Yolo Projects)	<div>Class Detected – apple, orange, banana, watermelon, pineapple.</div> <div>Confidence Score – 99%</div>	<div>train_datagen = ImageDataGenerator(rescale=1./255,shear_range=0.2,zoom_range=0.2,horizontal_flip=True)</div> <div>test_datagen=ImageDataGenerator(rescale=1./255)</div> <div>x_train = train_datagen.flow_from_directory(r'F:\IBM PROJECT\Nutrition Analyzer\Dataset\TRAIN_SET', target_size=(64, 64),batch_size=5,color_mode='rgb',class_mode='sparse')</div> <div>x_test = test_datagen.flow_from_directory(r'F:\IBM PROJECT\Nutrition Analyzer\Dataset\TEST_SET', target_size=(64, 64),batch_size=5,color_mode='rgb',class_mode='sparse')</div> <div>Found 3982 images belonging to 5 classes.</div> <div>Found 3982 images belonging to 5 classes.</div> <div>print(x_train.class_indices)</div> <div>{'APPLES': 0, 'BANANA': 1, 'ORANGE': 2, 'PINEAPPLE': 3, 'WATERMELON': 4}</div>

