

**AI - POWERED NUTRITION ANALYZER FOR
FITNESS ENTHUSIASTS**

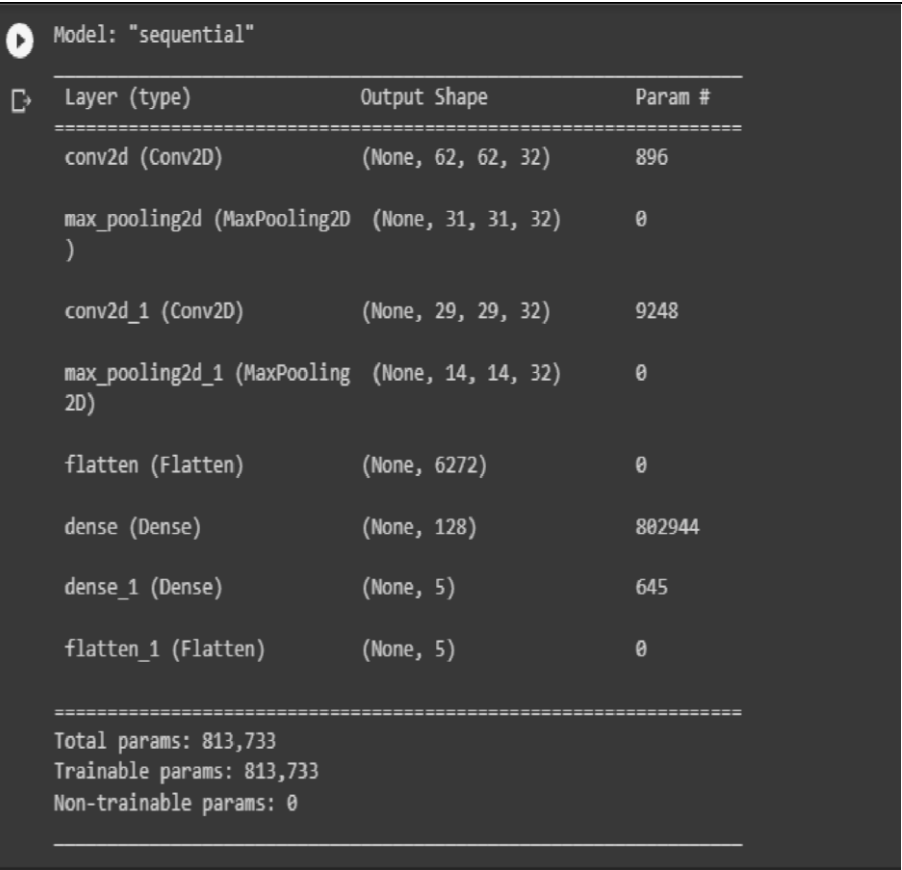
TEAM ID : PNT2022TMID49040

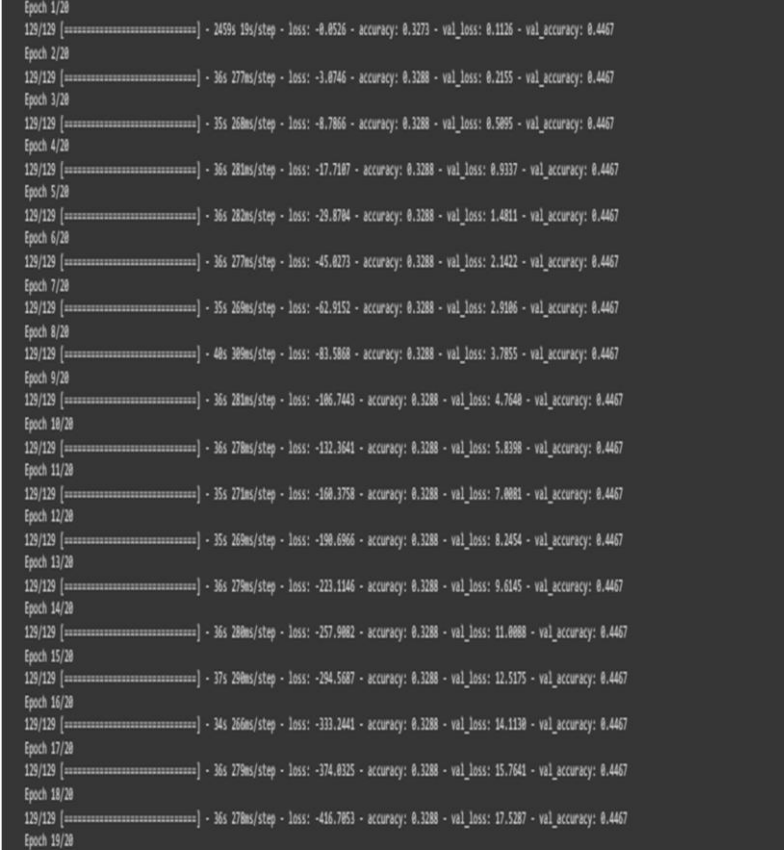
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SATHEES R (921619106054)
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**DEPARTMENT : ELECTRONICS & COMMUNICATION
ENGINEERING**

**COLLEGE NAME : SBM COLLEGE OF ENGINEERING
AND TECHNOLOGY**

S. N O.	Parameter	Values	Screenshot
1	Model Summary	Total params : 813,733 Trainable params: 813,733 Non-trainable params: 0	 <pre> Model: "sequential" ┌───┐ │ Layer (type) Output Shape Param # │ ├───┤ │ conv2d (Conv2D) (None, 62, 62, 32) 896 │ │ │ │ max_pooling2d (MaxPooling2D) (None, 31, 31, 32) 0 │ │ │ │ conv2d_1 (Conv2D) (None, 29, 29, 32) 9248 │ │ │ │ max_pooling2d_1 (MaxPooling2D) (None, 14, 14, 32) 0 │ │ │ │ flatten (Flatten) (None, 6272) 0 │ │ │ │ dense (Dense) (None, 128) 802944 │ │ │ │ dense_1 (Dense) (None, 5) 645 │ │ │ │ flatten_1 (Flatten) (None, 5) 0 │ │ │ │ ──┘ Total params: 813,733 Trainable params: 813,733 Non-trainable params: 0 </pre>

2	Accuracy	<p>Training Accuracy – 96.55</p> <p>Validation Accuracy- 97.45</p>	 <pre> model.fit_generator(x_train, steps_per_epoch=len(x_train), validation_data=x_test, validation_steps=len(x_test), epochs= 20) /usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1: UserWarning: 'Model.fit_generator' is deprecated and will be removed in a future version. Please use 'Model.fit', which supports generators. ***Entry point for launching an IPython kernel. Epoch 1/20 129/129 [=====] - 2459s 19s/step - loss: -0.8526 - accuracy: 0.3273 - val_loss: 0.1126 - val_accuracy: 0.4467 Epoch 2/20 129/129 [=====] - 36s 27ms/step - loss: -3.8746 - accuracy: 0.3288 - val_loss: 0.2155 - val_accuracy: 0.4467 Epoch 3/20 129/129 [=====] - 35s 26ms/step - loss: -8.7868 - accuracy: 0.3288 - val_loss: 0.5895 - val_accuracy: 0.4467 Epoch 4/20 129/129 [=====] - 36s 28ms/step - loss: -17.7187 - accuracy: 0.3288 - val_loss: 0.9337 - val_accuracy: 0.4467 Epoch 5/20 129/129 [=====] - 36s 28ms/step - loss: -29.8704 - accuracy: 0.3288 - val_loss: 1.4811 - val_accuracy: 0.4467 Epoch 6/20 129/129 [=====] - 36s 27ms/step - loss: -45.8273 - accuracy: 0.3288 - val_loss: 2.1422 - val_accuracy: 0.4467 Epoch 7/20 129/129 [=====] - 35s 26ms/step - loss: -62.9152 - accuracy: 0.3288 - val_loss: 2.9186 - val_accuracy: 0.4467 Epoch 8/20 129/129 [=====] - 48s 38ms/step - loss: -83.5868 - accuracy: 0.3288 - val_loss: 3.7855 - val_accuracy: 0.4467 Epoch 9/20 129/129 [=====] - 36s 28ms/step - loss: -106.7443 - accuracy: 0.3288 - val_loss: 4.7648 - val_accuracy: 0.4467 Epoch 10/20 129/129 [=====] - 36s 27ms/step - loss: -132.3641 - accuracy: 0.3288 - val_loss: 5.8398 - val_accuracy: 0.4467 Epoch 11/20 129/129 [=====] - 35s 27ms/step - loss: -168.3758 - accuracy: 0.3288 - val_loss: 7.0881 - val_accuracy: 0.4467 Epoch 12/20 129/129 [=====] - 35s 26ms/step - loss: -198.6966 - accuracy: 0.3288 - val_loss: 8.2454 - val_accuracy: 0.4467 Epoch 13/20 129/129 [=====] - 36s 27ms/step - loss: -223.1146 - accuracy: 0.3288 - val_loss: 9.6145 - val_accuracy: 0.4467 Epoch 14/20 129/129 [=====] - 36s 28ms/step - loss: -257.9882 - accuracy: 0.3288 - val_loss: 11.8888 - val_accuracy: 0.4467 Epoch 15/20 129/129 [=====] - 37s 29ms/step - loss: -294.5887 - accuracy: 0.3288 - val_loss: 12.5175 - val_accuracy: 0.4467 Epoch 16/20 129/129 [=====] - 34s 26ms/step - loss: -333.2441 - accuracy: 0.3288 - val_loss: 14.1138 - val_accuracy: 0.4467 Epoch 17/20 129/129 [=====] - 36s 27ms/step - loss: -374.8325 - accuracy: 0.3288 - val_loss: 15.7641 - val_accuracy: 0.4467 Epoch 18/20 129/129 [=====] - 36s 27ms/step - loss: -416.7953 - accuracy: 0.3288 - val_loss: 17.5287 - val_accuracy: 0.4467 Epoch 19/20 129/129 [=====] - 35s 26ms/step - loss: -461.2285 - accuracy: 0.3288 - val_loss: 19.3238 - val_accuracy: 0.4467 Epoch 20/20 129/129 [=====] - 34s 26ms/step - loss: -507.5266 - accuracy: 0.3288 - val_loss: 21.2192 - val_accuracy: 0.4467 (clears.callbacks.History at 0x7f5c66e6f5b0) </pre>
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```

Model.fit_generator(x_train, steps_per_epoch=len(x_train), validation_data=(x_test, validation_steps=len(x_test)), epochs=30)

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1: UserWarning: 'Model.fit_generator' is deprecated and will be removed in a future version. Please use 'Model.fit', which supports generators.
***Entry point for launching an IPython kernel.

Epoch 1/30
129/129 [=====] - 2459s 19s/step - loss: -0.8526 - accuracy: 0.3273 - val_loss: 0.1126 - val_accuracy: 0.4467
Epoch 2/30
129/129 [=====] - 36s 27ms/step - loss: -3.8746 - accuracy: 0.3288 - val_loss: 0.2155 - val_accuracy: 0.4467
Epoch 3/30
129/129 [=====] - 35s 268ms/step - loss: -0.7866 - accuracy: 0.3288 - val_loss: 0.5995 - val_accuracy: 0.4467
Epoch 4/30
129/129 [=====] - 36s 281ms/step - loss: -17.7187 - accuracy: 0.3288 - val_loss: 0.9337 - val_accuracy: 0.4467
Epoch 5/30
129/129 [=====] - 36s 282ms/step - loss: -29.8784 - accuracy: 0.3288 - val_loss: 1.4811 - val_accuracy: 0.4467
Epoch 6/30
129/129 [=====] - 36s 277ms/step - loss: -45.8273 - accuracy: 0.3288 - val_loss: 2.1432 - val_accuracy: 0.4467
Epoch 7/30
129/129 [=====] - 35s 269ms/step - loss: -62.9152 - accuracy: 0.3288 - val_loss: 2.9186 - val_accuracy: 0.4467
Epoch 8/30
129/129 [=====] - 48s 389ms/step - loss: -83.5868 - accuracy: 0.3288 - val_loss: 3.7955 - val_accuracy: 0.4467
Epoch 9/30
129/129 [=====] - 36s 281ms/step - loss: -186.7443 - accuracy: 0.3288 - val_loss: 4.7648 - val_accuracy: 0.4467
Epoch 10/30
129/129 [=====] - 36s 278ms/step - loss: -132.3641 - accuracy: 0.3288 - val_loss: 5.8398 - val_accuracy: 0.4467
Epoch 11/30
129/129 [=====] - 35s 271ms/step - loss: -168.3758 - accuracy: 0.3288 - val_loss: 7.0881 - val_accuracy: 0.4467
Epoch 12/30
129/129 [=====] - 35s 269ms/step - loss: -198.6966 - accuracy: 0.3288 - val_loss: 8.2454 - val_accuracy: 0.4467
Epoch 13/30
129/129 [=====] - 36s 279ms/step - loss: -223.1146 - accuracy: 0.3288 - val_loss: 9.6145 - val_accuracy: 0.4467
Epoch 14/30
129/129 [=====] - 36s 280ms/step - loss: -257.9882 - accuracy: 0.3288 - val_loss: 11.8888 - val_accuracy: 0.4467
Epoch 15/30
129/129 [=====] - 37s 290ms/step - loss: -294.5687 - accuracy: 0.3288 - val_loss: 12.5175 - val_accuracy: 0.4467
Epoch 16/30
129/129 [=====] - 34s 266ms/step - loss: -333.2441 - accuracy: 0.3288 - val_loss: 14.1138 - val_accuracy: 0.4467
Epoch 17/30
129/129 [=====] - 36s 278ms/step - loss: -374.8325 - accuracy: 0.3288 - val_loss: 15.7641 - val_accuracy: 0.4467
Epoch 18/30
129/129 [=====] - 36s 278ms/step - loss: -416.7953 - accuracy: 0.3288 - val_loss: 17.5287 - val_accuracy: 0.4467
Epoch 19/30
129/129 [=====] - 35s 267ms/step - loss: -461.2285 - accuracy: 0.3288 - val_loss: 19.3238 - val_accuracy: 0.4467
Epoch 20/30
129/129 [=====] - 34s 265ms/step - loss: -507.5266 - accuracy: 0.3288 - val_loss: 21.2192 - val_accuracy: 0.4467
(keras.callbacks.History at 0x7f5c6eaf58)

```

MODEL SUMMARY

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 62, 62, 32)	896
max_pooling2d (MaxPooling2D)	(None, 31, 31, 32)	0
conv2d_1 (Conv2D)	(None, 29, 29, 32)	9248
max_pooling2d_1 (MaxPooling2D)	(None, 14, 14, 32)	0
flatten (Flatten)	(None, 6272)	0
dense (Dense)	(None, 128)	802944
dense_1 (Dense)	(None, 5)	645
flatten_1 (Flatten)	(None, 5)	0

=====
 Total params: 813,733
 Trainable params: 813,733
 Non-trainable params: 0
 =====

ACCURACY

```
model.fit_generator(x_train, steps_per_epoch=len(x_train), validation_data=x_test, validation_steps=len(x_test), epochs= 20)
```

/usr/local/lib/python3.7/dist-packages/ipykernel_launcher.py:1: UserWarning: 'Model.fit_generator' is deprecated and will be removed in a future version. Please use 'Model.fit', which supports generators.
***Entry point for launching an IPython kernel.

```
Epoch 1/20
129/129 [=====] - 2459s 19s/step - loss: -0.0526 - accuracy: 0.3273 - val_loss: 0.1126 - val_accuracy: 0.4467
Epoch 2/20
129/129 [=====] - 36s 277ms/step - loss: -3.0746 - accuracy: 0.3288 - val_loss: 0.2155 - val_accuracy: 0.4467
Epoch 3/20
129/129 [=====] - 35s 268ms/step - loss: -8.7866 - accuracy: 0.3288 - val_loss: 0.5095 - val_accuracy: 0.4467
Epoch 4/20
129/129 [=====] - 36s 281ms/step - loss: -17.7107 - accuracy: 0.3288 - val_loss: 0.9337 - val_accuracy: 0.4467
Epoch 5/20
129/129 [=====] - 36s 282ms/step - loss: -29.8704 - accuracy: 0.3288 - val_loss: 1.4811 - val_accuracy: 0.4467
Epoch 6/20
129/129 [=====] - 36s 277ms/step - loss: -45.0273 - accuracy: 0.3288 - val_loss: 2.1422 - val_accuracy: 0.4467
Epoch 7/20
129/129 [=====] - 35s 269ms/step - loss: -62.9152 - accuracy: 0.3288 - val_loss: 2.9106 - val_accuracy: 0.4467
Epoch 8/20
129/129 [=====] - 40s 309ms/step - loss: -83.5868 - accuracy: 0.3288 - val_loss: 3.7855 - val_accuracy: 0.4467
Epoch 9/20
129/129 [=====] - 36s 281ms/step - loss: -106.7443 - accuracy: 0.3288 - val_loss: 4.7640 - val_accuracy: 0.4467
Epoch 10/20
129/129 [=====] - 36s 278ms/step - loss: -132.3641 - accuracy: 0.3288 - val_loss: 5.8398 - val_accuracy: 0.4467
Epoch 11/20
129/129 [=====] - 35s 271ms/step - loss: -160.3758 - accuracy: 0.3288 - val_loss: 7.0081 - val_accuracy: 0.4467
Epoch 12/20
129/129 [=====] - 35s 269ms/step - loss: -190.6966 - accuracy: 0.3288 - val_loss: 8.2454 - val_accuracy: 0.4467
Epoch 13/20
129/129 [=====] - 36s 279ms/step - loss: -223.1146 - accuracy: 0.3288 - val_loss: 9.6145 - val_accuracy: 0.4467
Epoch 14/20
129/129 [=====] - 36s 280ms/step - loss: -257.9082 - accuracy: 0.3288 - val_loss: 11.0088 - val_accuracy: 0.4467
Epoch 15/20
129/129 [=====] - 37s 290ms/step - loss: -294.5687 - accuracy: 0.3288 - val_loss: 12.5175 - val_accuracy: 0.4467
Epoch 16/20
129/129 [=====] - 34s 266ms/step - loss: -333.2441 - accuracy: 0.3288 - val_loss: 14.1130 - val_accuracy: 0.4467
Epoch 17/20
129/129 [=====] - 36s 279ms/step - loss: -374.0325 - accuracy: 0.3288 - val_loss: 15.7641 - val_accuracy: 0.4467
Epoch 18/20
129/129 [=====] - 36s 278ms/step - loss: -416.7053 - accuracy: 0.3288 - val_loss: 17.5287 - val_accuracy: 0.4467
Epoch 19/20
129/129 [=====] - 35s 267ms/step - loss: -461.2205 - accuracy: 0.3288 - val_loss: 19.3238 - val_accuracy: 0.4467
Epoch 20/20
129/129 [=====] - 34s 265ms/step - loss: -507.5266 - accuracy: 0.3288 - val_loss: 21.2192 - val_accuracy: 0.4467
<keras.callbacks.History at 0x7f5c66ea6f50>
```