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**4.1 Input Layers (Convolution ,MaxPooling,Flatten)**\"\n","    ],\n","    \"metadata\": {\n","
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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.\\n\",\n","   \"
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accuracy: 0.4714 - val_loss: 1.1275 - val_accuracy: 0.5532\\n\",\n","   \"Epoch 2/30\\n\",\n","
\"180/180 [==============================] - 74s 409ms/step - loss: 1.0600 - accuracy: 0.5854 -
val_loss: 0.9406 - val_accuracy: 0.6301\\n\",\n","   \"Epoch 3/30\\n\",\n","   \"180/180
[==============================] - 73s 405ms/step - loss: 0.9678 - accuracy: 0.6247 - val_loss:
0.9603 - val_accuracy: 0.6203\\n\",\n","   \"Epoch 4/30\\n\",\n","   \"180/180
[==============================] - 77s 429ms/step - loss: 0.8884 - accuracy: 0.6546 - val_loss:
0.8187 - val_accuracy: 0.6938\\n\",\n","   \"Epoch 5/30\\n\",\n","   \"180/180
[==============================] - 76s 422ms/step - loss: 0.8358 - accuracy: 0.6787 - val_loss:
0.7393 - val_accuracy: 0.7225\\n\",\n","   \"Epoch 6/30\\n\",\n","   \"180/180
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0.8389 - val_accuracy: 0.6928\\n\",\n","   \"Epoch 7/30\\n\",\n","   \"180/180
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0.8503 - val_accuracy: 0.6789\\n\",\n","   \"Epoch 8/30\\n\",\n","   \"180/180
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0.6458 - val_accuracy: 0.7438\\n\",\n","   \"Epoch 10/30\\n\",\n","   \"180/180
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0.3396 - val_accuracy: 0.8768\\n\",\n","   \"Epoch 16/30\\n\",\n","   \"180/180
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0.3472 - val_accuracy: 0.8738\\n\",\n","   \"Epoch 17/30\\n\",\n","   \"180/180
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[==============================] - 70s 389ms/step - loss: 0.3441 - accuracy: 0.8726 - val_loss:

0.4008 - val_accuracy: 0.8589\\n\",\n\",\" \"Epoch 19/30\\n\",\n\",\" \"180/180 [==============================] - 73s 404ms/step - loss: 0.3467 - accuracy: 0.8719 - val_loss: 0.2484 - val_accuracy: 0.9060\\n\",\n\",\" \"Epoch 20/30\\n\",\n\",\" \"180/180 [==============================] - 72s 398ms/step - loss: 0.3327 - accuracy: 0.8758 - val_loss: 0.2234 - val_accuracy: 0.9210\\n\",\n\",\" \"Epoch 21/30\\n\",\n\",\" \"180/180 [==============================] - 73s 403ms/step - loss: 0.2807 - accuracy: 0.9009 - val_loss: 0.2830 - val_accuracy: 0.9036\\n\",\n\",\" \"Epoch 22/30\\n\",\n\",\" \"180/180 [==============================] - 70s 392ms/step - loss: 0.2751 - accuracy: 0.9013 - val_loss: 0.2392 - val_accuracy: 0.9141\\n\",\n\",\" \"Epoch 23/30\\n\",\n\",\" \"180/180 [==============================] - 73s 404ms/step - loss: 0.2549 - accuracy: 0.9097 - val_loss: 0.2221 - val_accuracy: 0.9189\\n\",\n\",\" \"Epoch 24/30\\n\",\n\",\" \"180/180 [==============================] - 72s 399ms/step - loss: 0.2412 - accuracy: 0.9243 - val_loss: 0.2029 - val_accuracy: 0.9291\\n\",\n\",\" \"Epoch 25/30\\n\",\n\",\" \"180/180 [==============================] - 72s 402ms/step - loss: 0.2360 - accuracy: 0.9199 - val_loss: 0.1965 - val_accuracy: 0.9307\\n\",\n\",\" \"Epoch 26/30\\n\",\n\",\" \"180/180 [==============================] - 72s 401ms/step - loss: 0.2199 - accuracy: 0.9201 - val_loss: 0.1919 - val_accuracy: 0.9331\\n\",\n\",\" \"Epoch 27/30\\n\",\n\",\" \"180/180 [==============================] - 72s 400ms/step - loss: 0.2008 - accuracy: 0.9363 - val_loss: 0.1218 - val_accuracy: 0.9560\\n\",\n\",\" \"Epoch 28/30\\n\",\n\",\" \"180/180 [==============================] - 73s 406ms/step - loss: 0.1889 - accuracy: 0.9310 - val_loss: 0.2838 - val_accuracy: 0.9108\\n\",\n\",\" \"Epoch 29/30\\n\",\n\",\" \"180/180 [==============================] - 70s 389ms/step - loss: 0.2046 - accuracy: 0.9275 - val_loss: 0.2116 - val_accuracy: 0.9307\\n\",\n\",\" \"Epoch 30/30\\n\",\n\",\" \"180/180 [==============================] - 70s 392ms/step - loss: 0.1886 - accuracy: 0.9372 - val_loss: 0.2091 - val_accuracy: 0.9280\\n\",\n\"\",\"]\n\",\" },\n\",\" {\n\",\" \"output_type\": \"execute_result\",\n\",\" \"data\": {\n\",\" \"text/plain\": [\n\",\" \"<keras.callbacks.History at 0x7f3e15438e50>\"\n\",\"]\n\",\" },\n\",\" \"metadata\": {},\n\",\" \"execution_count\": 20\n\",\" }\n\",\"]\n\",\" },\n\",\" {\n\",\" \"cell_type\": \"markdown\",\n\",\" \"source\": [\n\",\" \"# **Step -6 Save The model**\"\n\",\"],\n\",\" \"metadata\": {\n\",\" \"id\": \"1uK880jw9Kru\"\n\",\" }\n\",\" },\n\",\" {\n\",\" \"cell_type\": \"code\",\n\",\" \"source\": [\n\",\" \"model.save('Flowers_classification_model1.h5')\"\n\",\"],\n\",\" \"metadata\": {\n\",\" \"id\": \"scoaKurE9FZk\"\n\",\" },\n\",\" \"execution_count\": 21,\n\",\" \"outputs\": []\n\",\" },\n\",\" {\n\",\" \"cell_type\": \"markdown\",\n\",\" \"source\": [\n\",\" \"# **Step -7 Test The model**\"\n\",\"],\n\",\" \"metadata\": {\n\",\" \"id\": \"YAH2UVpi9RMV\"\n\",\" }\n\",\" },\n\",\" {\n\",\" \"cell_type\": \"code\",\n\",\" \"source\": [\n\",\" \"ls\"\n\",\"],\n\",\" \"metadata\": {\n\",\" \"colab\": {\n\",\" \"base_uri\": \"https://localhost:8080/\"\n\",\" },\n\",\" \"id\": \"Z-co6hBAEmzg\",\n\",\" \"outputId\": \"bf8a661d-3210-4695-dcb7-48e6f365dfce\"\n\",\" },\n\",\" \"execution_count\": 22,\n\",\" \"outputs\": [\n\",\" {\n\",\" \"output_type\": \"stream\",\n\",\" \"name\": \"stdout\",\n\",\" \"text\": [\n\",\" \"\\\\u001b[0m\\\\u001b[01;34mflowers\\\\u001b[0m/ Flowers_classification_model1.h5 Flowers-Dataset.zip video.mp4\\\\n\"\n\",\"]\n\",\" }\n\",\"]\n\",\" },\n\",\" {\n\",\" \"cell_type\": \"code\",\n\",\" \"source\": [\n\",\" \"import numpy as np\\\\n\",\n\",\" \"from tensorflow.keras.models import load_model\\\\n\",\n\",\" \"from tensorflow.keras.preprocessing

import image\"\n","],\n"," \"metadata\": {\n"," \"id\": \"mJvRRo7VvkeO\"\n"," },\n"," \"execution_count\": 23,\n"," \"outputs\": []\n"," },\n"," {\n"," \"cell_type\": \"code\",\n"," \"source\": [\n"," \"# Load the model\\n\",\n"," \"model=load_model('Flowers_classification_model1.h5')\"\n","],\n"," \"metadata\": {\n"," \"id\": \"xo6F_4jw9KBZ\"\n"," },\n"," \"execution_count\": 24,\n"," \"outputs\": []\n"," },\n"," {\n"," \"cell_type\": \"code\",\n"," \"source\": [\n"," \"img=image.load_img(r\\\"/content/s3.jpg\\\",target_size=(64,64))\\n\",\n"," \"x=image.img_to_array(img)\\n\",\n"," \"x=np.expand_dims(x,axis=0)\\n\",\n"," \"y=np.argmax(model.predict(x),axis=1)\\n\",\n"," \"# x_train.class_indices\\n\",\n"," \"index=['daisy','dandelion','rose','sunflower','tulip']\\n\",\n"," \"index[y[0]]\"\n","],\n"," \"metadata\": {\n"," \"colab\": {\n"," \"base_uri\": \"https://localhost:8080/\",\n"," \"height\": 35\n"," },\n"," \"id\": \"2rnrfMAf-AB9\",\n"," \"outputId\": \"c6357a8b-5163-4884-c82e-05651a65571c\"\n"," },\n"," \"execution_count\": 38,\n"," \"outputs\": [\n"," {\n"," \"output_type\": \"execute_result\",\n"," \"data\": {\n"," \"text/plain\": [\n"," \"'sunflower'\"\n","],\n"," \"application/vnd.google.colaboratory.intrinsic+json\": {\n"," \"type\": \"string\"\n"," }\n"," },\n"," \"metadata\": {},\n"," \"execution_count\": 38\n"," }\n","]\n"," },\n"," {\n"," \"cell_type\": \"markdown\",\n"," \"source\": [\n"," \"# **We Achieved 93 percent of accuracy with this model** \\n\",\n"," \"# **Trained by Team ID : PNT2022TMID17050**\"\n","],\n"," \"metadata\": {\n"," \"id\": \"2f85wU8fL0Si\"\n"," }\n","]\n","}"]},{"cell_type":"code","source":[],"metadata":{"id":"VYZTfv_uxTvF"},"execution_count":null,"outputs":[]}]}