KSR College Of Engineering , Tiruchengode

Department of Information Technology

NALAIYA THIRAN

AI ASSESMENT- 3


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]

}

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]

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   "from tensorflow.keras.layers import Dense,Convolution2D,MaxPooling2D,Flatten"
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```

```
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```
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```

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     "Model: \"sequential\"\n",
     "_____\n",
```

```
      " Layer (type)              Output Shape            Param #   \n",
      "=================================================================\n",
      " conv2d (Conv2D)           (None, 62, 62, 32)       896      \n",
      "                                                                \n",
      " max_pooling2d (MaxPooling2D  (None, 31, 31, 32)      0        \n",
      " )                                                              \n",
      "                                                                \n",
      " flatten (Flatten)         (None, 30752)           0        \n",
      "                                                                \n",
      "=================================================================\n",
      "Total params: 896\n",
      "Trainable params: 896\n",
      "Non-trainable params: 0\n",
      "_________________________________________________________________\n"
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```

```
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```

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```

```
"  \"\"\"Entry point for launching an IPython kernel.\n"

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  "Epoch 2/30\n",

  "180/180 [==============================] - 74s 409ms/step - loss: 1.0600 - accuracy: 0.5854 - val_loss: 0.9406 - val_accuracy: 0.6301\n",

  "Epoch 3/30\n",

  "180/180 [==============================] - 73s 405ms/step - loss: 0.9678 - accuracy: 0.6247 - val_loss: 0.9603 - val_accuracy: 0.6203\n",

  "Epoch 4/30\n",

  "180/180 [==============================] - 77s 429ms/step - loss: 0.8884 - accuracy: 0.6546 - val_loss: 0.8187 - val_accuracy: 0.6938\n",

  "Epoch 5/30\n",

  "180/180 [==============================] - 76s 422ms/step - loss: 0.8358 - accuracy: 0.6787 - val_loss: 0.7393 - val_accuracy: 0.7225\n",

  "Epoch 6/30\n",

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  "Epoch 7/30\n",

  "180/180 [==============================] - 73s 405ms/step - loss: 0.7521 - accuracy: 0.7158 - val_loss: 0.8503 - val_accuracy: 0.6789\n",
```

"Epoch 8/30\n",

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"Epoch 9/30\n",

"180/180 [==============================] - 72s 400ms/step - loss: 0.6502 - accuracy: 0.7521 - val_loss: 0.6458 - val_accuracy: 0.7438\n",

"Epoch 10/30\n",

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"Epoch 11/30\n",

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"Epoch 12/30\n",

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"Epoch 13/30\n",

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"Epoch 14/30\n",

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"Epoch 15/30\n",

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"Epoch 16/30\n",

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"Epoch 17/30\n",

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"Epoch 18/30\n",

"180/180 [==============================] - 70s 389ms/step - loss: 0.3441 - accuracy: 0.8726 - val_loss: 0.4008 - val_accuracy: 0.8589\n",

"Epoch 19/30\n",

"180/180 [==============================] - 73s 404ms/step - loss: 0.3467 - accuracy: 0.8719 - val_loss: 0.2484 - val_accuracy: 0.9060\n",

"Epoch 20/30\n",

"180/180 [==============================] - 72s 398ms/step - loss: 0.3327 - accuracy: 0.8758 - val_loss: 0.2234 - val_accuracy: 0.9210\n",

"Epoch 21/30\n",

"180/180 [==============================] - 73s 403ms/step - loss: 0.2807 - accuracy: 0.9009 - val_loss: 0.2830 - val_accuracy: 0.9036\n",

"Epoch 22/30\n",

"180/180 [==============================] - 70s 392ms/step - loss: 0.2751 - accuracy: 0.9013 - val_loss: 0.2392 - val_accuracy: 0.9141\n",

"Epoch 23/30\n",

"180/180 [==============================] - 73s 404ms/step - loss: 0.2549 - accuracy: 0.9097 - val_loss: 0.2221 - val_accuracy: 0.9189\n",

"Epoch 24/30\n",

"180/180 [==============================] - 72s 399ms/step - loss: 0.2412 - accuracy: 0.9243 - val_loss: 0.2029 - val_accuracy: 0.9291\n",

"Epoch 25/30\n",

"180/180 [==============================] - 72s 402ms/step - loss: 0.2360 - accuracy: 0.9199 - val_loss: 0.1965 - val_accuracy: 0.9307\n",

"Epoch 26/30\n",

"180/180 [==============================] - 72s 401ms/step - loss: 0.2199 - accuracy: 0.9201 - val_loss: 0.1919 - val_accuracy: 0.9331\n",

```
        "Epoch 27/30\n",

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        "Epoch 28/30\n",

        "180/180 [==============================] - 73s 406ms/step - loss: 0.1889 - accuracy: 0.9310 - val_loss: 0.2838 - val_accuracy: 0.9108\n",

        "Epoch 29/30\n",

        "180/180 [==============================] - 70s 389ms/step - loss: 0.2046 - accuracy: 0.9275 - val_loss: 0.2116 - val_accuracy: 0.9307\n",

        "Epoch 30/30\n",

        "180/180 [==============================] - 70s 392ms/step - loss: 0.1886 - accuracy: 0.9372 - val_loss: 0.2091 - val_accuracy: 0.9280\n"

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    "# **Step -7 Test The model**"
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    "outputId": "bf8a661d-3210-4695-dcb7-48e6f365dfce"
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     ]
    }
   ]
```

```
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  "from tensorflow.keras.models import load_model\n",
  "from tensorflow.keras.preprocessing import image"
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 },
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  "model=load_model('Flowers_classification_model1.h5')"
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 },
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```

```
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  "x=image.img_to_array(img)\n",
  "x=np.expand_dims(x,axis=0)\n",
  "y=np.argmax(model.predict(x),axis=1)\n",
  "# x_train.class_indices\n",
  "index=['daisy','dandelion','rose','sunflower','tulip']\n",
  "index[y[0]]"
 ],
 "metadata": {
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          }
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        "execution_count": 38
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    ]
  },
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    "cell_type": "markdown",
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      "# **Trained by Team ID : PNT2022TMID17050**"
    ],
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    }
  }
 ]
}
```