

```
In [1]: 1 # pip install tensorflow
        2
```

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In [2]: 1 # pip install matplotlib
        2
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In [3]: 1 # pip install opencv-python
        2
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In [4]: 1 # pip install numpy
        2
```

```
In [5]: 1 import tensorflow as tf
        2 import matplotlib.pyplot as plt
        3 import cv2
        4 import os
        5 import numpy as np
        6 from tensorflow.keras.preprocessing.image import ImageDataGenerator
        7 from tensorflow.keras.preprocessing import image
        8 from tensorflow.keras.optimizers import RMSprop
```

E:\AnacondaDATASCIENCE\lib\site-packages\scipy__init__.py:155: UserWarning: A NumPy version $\geq 1.18.5$ and $< 1.25.0$ is required for this version of SciPy (detected version 1.26.4
warnings.warn(f"A NumPy version \geq {np_minversion} and $<$ {np_maxversion}")

```
In [6]: 1 img=image.load_img("/content/drive/MyDrive/colab/basedata/train/Loam Soil/10.jpeg")
```

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FileNotFoundError                                Traceback (most recent call last)
~\AppData\Local\Temp\ipykernel_13068\1106985946.py in <module>
----> 1 img=image.load_img("/content/drive/MyDrive/colab/basedata/train/Loam Soil/10.jpeg")
```

```
E:\AnacondaDATASCIENCE\lib\site-packages\keras\src\utils\image_utils.py in
load_img(path, color_mode, target_size, interpolation, keep_aspect_ratio)
    233         if isinstance(path, pathlib.Path):
    234             path = str(path.resolve())
--> 235         with open(path, "rb") as f:
    236             img = pil_image.open(io.BytesIO(f.read()))
    237     else:
```

FileNotFoundError: [Errno 2] No such file or directory: '/content/drive/MyDrive/colab/basedata/train/Loam Soil/10.jpeg'

```
In [ ]: 1 plt.imshow(img)
```

```
In [ ]: 1 cv2.imread("/content/drive/MyDrive/colab/basedata/train/Loam Soil/10.jpeg")
```

```
In [ ]: 1 train =ImageDataGenerator(rescale=1/255)
        2 validation =ImageDataGenerator(rescale=1/255)
        3
```



```
In [ ]: 1 dir_path='/content/drive/MyDrive/colab/basedata/test'
        2 for i in os.listdir(dir_path):
        3     img=image.load_img(dir_path+'/'+i,target_size=(200,200))
        4     plt.imshow(img)
        5     plt.show()
        6     X=image.img_to_array(img)
        7     X=np.expand_dims(X,axis=0)
        8     images=np.vstack([X])
        9     val=model.predict(images)
       10     if val[0][0] < 0.5:
       11         print("Loam Soil")
       12     else:
       13         print("Sandy Soil")
```