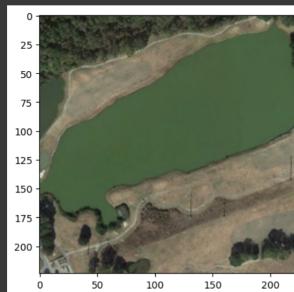


Major Project

Test 1



```
1s
import matplotlib.pyplot as plt
img = np.array(test[500])
plt.imshow(img)
plt.show()
```

```
140
# # img = img_to_array(img)
# # img = np.array(img)
# img = img_to_array(img)

# img = load_img(img_path)
img = np.array(test[500])
# img = img_to_array(img)
img = cv2.resize(img,(224,224))
img = np.expand_dims(img, axis=0)

saved_model = load_model('/content/drive/MyDrive/MajorProject/imgmodel_100_v1.h5')
with open('/content/drive/MyDrive/MajorProject/features.pkl', 'rb') as f:
    featuresS = pickle.load(f)
caption = predict_caption(saved_model, img, tokenizer, max_length, featuresS)
caption = caption.replace("startseq", "")
caption = caption.replace("endseq", "")
print(caption)
```

many green trees are around a pond

```
f16] import matplotlib.pyplot as plt
```

Test 2

```

import matplotlib.pyplot as plt
img = np.array(test[920])
plt.imshow(img)
plt.show()

```

The screenshot shows a Jupyter Notebook cell with the code above. The output is a plot of a running track, viewed from an aerial perspective. The track is red and green, surrounded by buildings and trees. The plot has axes ranging from 0 to 200.

```

import cv2
img = cv2.resize(img,(224,224))
img = np.expand_dims(img, axis=0)

saved_model = load_model('/content/drive/MyDrive/MajorProject/imageCaptioningmodel_100_V1.h5')
with open('/content/drive/MyDrive/MajorProject/features.pkl', 'rb') as f:
    featuresS = pickle.load(f)
caption = predict_caption(saved_model, img, tokenizer, max_length, featuresS)
caption = caption.replace("startseq", "")
caption = caption.replace("endseq", "")
print(caption)

1/1 [=====] - 1s 554ms/step
1/1 [=====] - 0s 25ms/step
1/1 [=====] - 0s 24ms/step
1/1 [=====] - 0s 23ms/step
1/1 [=====] - 0s 24ms/step
1/1 [=====] - 0s 28ms/step
1/1 [=====] - 0s 28ms/step
1/1 [=====] - 0s 28ms/step
1/1 [=====] - 0s 27ms/step
many buildings are located in a commercial area

import matplotlib.pyplot as plt
img = np.array(test[920])
plt.imshow(img)
plt.show()

```

The screenshot shows a Jupyter Notebook cell with the code above. The output is a plot of a large building complex, viewed from an aerial perspective. The plot has axes ranging from 0 to 200. Below the plot, a generated caption is displayed: "many buildings are located in a commercial area".

Test 3

```

plt.imshow(img)
plt.show()

```

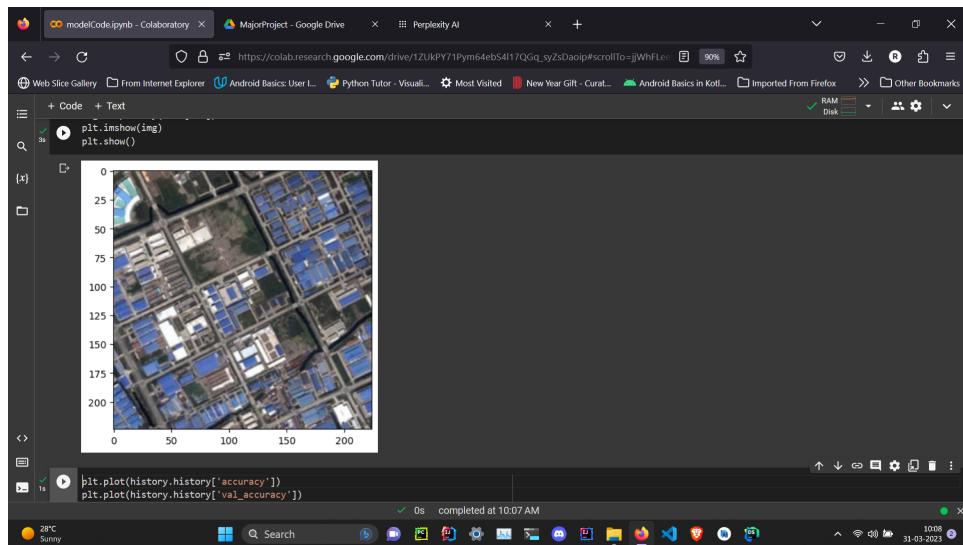
The screenshot shows a Jupyter Notebook cell with the code above. The output is a plot of a building complex, viewed from an aerial perspective. The plot has axes ranging from 0 to 200.

```


2s completed at 10:07 AM


```

Test 4



```

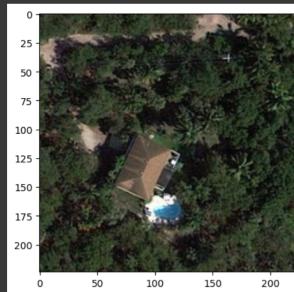
25] saved_model = load_model('/content/drive/MyDrive/MajorProject/ImageCaptioningmodel_100_V1.h5')
25] with open('/content/drive/MyDrive/MajorProject/features.pkl', 'rb') as f:
    featuresS = pickle.load(f)
caption = predict_caption(saved_model, img, tokenizer, max_length, featuresS)
caption = caption.replace("startseq", "")
caption = caption.replace("endseq", "")
print(caption)

26] import matplotlib.pyplot as plt
26] img = np.array(test[256])
26] plt.imshow(img)
26] plt.show()

```

0s completed at 10:07 AM

Test 5



```
2s  plt.imshow(img)
plt.show()

0  25  50  75  100  125  150  175  200
  0   50  100  150  200
```

The screenshot shows a Jupyter Notebook cell with a plot of an aerial photograph of a house and pool. The plot has axes ranging from 0 to 200 on both the x and y axes. The code in the cell is:

```
2s  plt.imshow(img)
plt.show()
```

```
2s  plt.plot(history.history['accuracy'])
plt.plot(history.history['val_accuracy'])

2s  completed at 10:10 AM
```

```
28°C Sunny
```

```
2s  1010  31-03-2023
```

```
+ Code + Text
2s  img = np.array(test[0])
# img = img_to_array(img)
img = cv2.resize(img,(224,224))
img = np.expand_dims(img, axis=0)

(x)  saved_model = load_model('/content/drive/MyDrive/MajorProject/imageCaptioningmodel_100_V1.h5')
with open('/content/drive/MyDrive/MajorProject/features.pkl', 'rb') as f:
    featuresS = pickle.load(f)
caption = predict_caption(saved_model, img, tokenizer, max_length, featuresS)
caption = caption.replace("startseq", "")
caption = caption.replace("endseq", "")
print(caption)

1/1 [=====] - 0s 359ms/step
1/1 [=====] - 0s 36ms/step
1/1 [=====] - 0s 18ms/step
1/1 [=====] - 0s 18ms/step
1/1 [=====] - 0s 19ms/step
1/1 [=====] - 0s 19ms/step
1/1 [=====] - 0s 19ms/step
1/1 [=====] - 0s 88ms/step
1/1 [=====] - 0s 26ms/step
1/1 [=====] - 0s 50ms/step
1/1 [=====] - 0s 50ms/step
many green trees are around a pond in a park

[34] import matplotlib.pyplot as plt
img = np.array(test[0])
plt.imshow(img)
plt.show()
```

The screenshot shows a Jupyter Notebook cell with a large amount of code related to image captioning. The code includes loading a saved model, reading features from a pickle file, and predicting captions. The predicted caption is "many green trees are around a pond in a park". The code in the cell is:

```
+ Code + Text
2s  img = np.array(test[0])
# img = img_to_array(img)
img = cv2.resize(img,(224,224))
img = np.expand_dims(img, axis=0)

(x)  saved_model = load_model('/content/drive/MyDrive/MajorProject/imageCaptioningmodel_100_V1.h5')
with open('/content/drive/MyDrive/MajorProject/features.pkl', 'rb') as f:
    featuresS = pickle.load(f)
caption = predict_caption(saved_model, img, tokenizer, max_length, featuresS)
caption = caption.replace("startseq", "")
caption = caption.replace("endseq", "")
print(caption)

1/1 [=====] - 0s 359ms/step
1/1 [=====] - 0s 36ms/step
1/1 [=====] - 0s 18ms/step
1/1 [=====] - 0s 18ms/step
1/1 [=====] - 0s 19ms/step
1/1 [=====] - 0s 19ms/step
1/1 [=====] - 0s 19ms/step
1/1 [=====] - 0s 88ms/step
1/1 [=====] - 0s 26ms/step
1/1 [=====] - 0s 50ms/step
1/1 [=====] - 0s 50ms/step
many green trees are around a pond in a park

[34] import matplotlib.pyplot as plt
img = np.array(test[0])
plt.imshow(img)
plt.show()
```