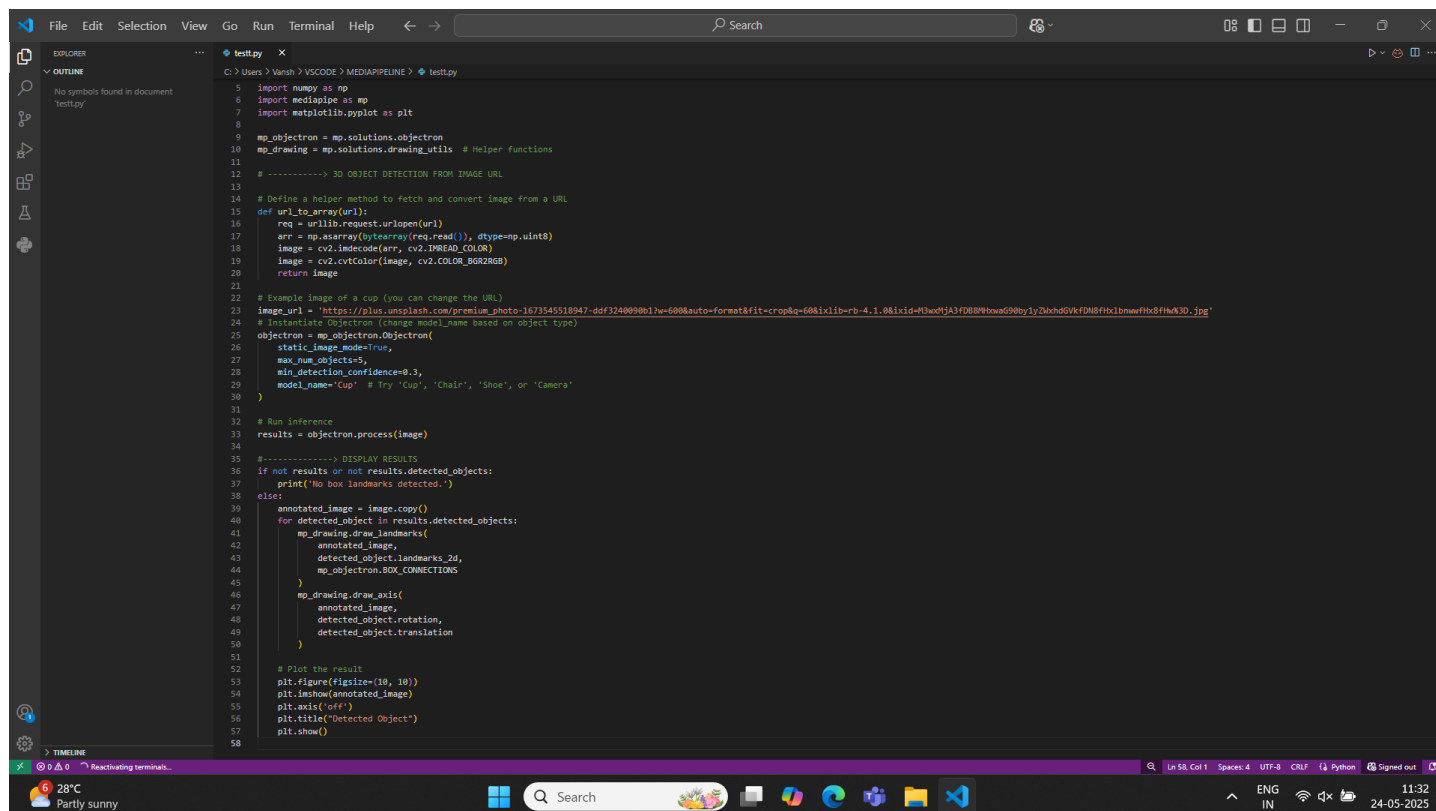


Python Code for Objectron



```
5 import numpy as np
6 import mediapipe as mp
7 import matplotlib.pyplot as plt
8
9 mp_objectron = mp.solutions.objectron
10 mp_drawing = mp.solutions.drawing_utils # Helper functions
11
12 # -----> 3D OBJECT DETECTION FROM IMAGE URL
13
14 # Define a helper method to fetch and convert image from a URL
15 def url_to_array(url):
16     req = urllib.request.urlopen(url)
17     arr = np.asarray(bytearray(req.read()), dtype=np.uint8)
18     image = cv2.imdecode(arr, cv2.IMREAD_COLOR)
19     image = cv2.cvtColor(image, cv2.COLOR_BGR2RGB)
20     return image
21
22 # Example image of a cup (you can change the URL)
23 image_url = 'https://plus.unsplash.com/premium_photo-1673545518947-ddf3240090b1?w=600&auto=format&fit=crop&q=60&ixlib=rb-4.1.0&ixid=P3wck5A3F0B0P0kwa090by1y2khd0VtF0MBF0clbnwF0B0F0wA3D.jpg'
24 # Instantiate Objectron (change model_name based on object type)
25 objectron = mp_objectron.Objectron(
26     static_image_mode=True,
27     max_num_objects=5,
28     min_detection_confidence=0.3,
29     model_name='Cup' # Try 'Cup', 'Chair', 'Shoe', or 'Camera'
30 )
31
32 # Run inference
33 results = objectron.process(image)
34
35 # -----> DISPLAY RESULTS
36 if not results or not results.detected_objects:
37     print('No box landmarks detected.')
38 else:
39     annotated_image = image.copy()
40     for detected_object in results.detected_objects:
41         mp_drawing.draw_landmarks(
42             annotated_image,
43             detected_object.landmarks_2d,
44             mp_objectron.BOX_CONNECTIONS
45         )
46         mp_drawing.draw_axis(
47             annotated_image,
48             detected_object.rotation,
49             detected_object.translation
50         )
51
52 # Plot the result
53 plt.figure(figsize=(10, 10))
54 plt.imshow(annotated_image)
55 plt.axis('off')
56 plt.title('Detected Object')
57 plt.show()
58
```

Detected Object (Cup) Output

