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1  import pyautogui
2  import keyboard
3  import json
4  import time
5  import os
6  import cv2
7  import numpy as np
8
9  COORDS_FILE = 'click_coords.json'
10 REGION_FILE = 'image_region.json'
11 IMAGE_PATH = 'confirm.png' # Update if needed
12 IMAGE_PATH_FALLBACK = 'confirm 2.png'
13 MATCH_THRESHOLD = 0.99 # strict match
14
15 # ----- Utilities -----
16 def load_json(file, default):
17     if os.path.exists(file):
18         with open(file, 'r') as f:
19             return json.load(f)
20     return default
21
22 def save_json(file, data):
23     with open(file, 'w') as f:
24         json.dump(data, f, indent=4)
25
26 # ----- Step 1: Record Point -----
27 def record_point():
28     x, y = pyautogui.position()
29     print(f"Captured position: ({x}, {y})")
30
31     print("Press 1 for 'Gem' or 2 for 'Slots'")
32     while True:
33         if keyboard.is_pressed('1'):
34             label = 'Gem'
35             break
36         elif keyboard.is_pressed('2'):
37             label = 'Slots'
38             break
39
40     data = load_json(COORDS_FILE, [])
41     entry = {'x': x, 'y': y, 'label': label}
42     data.append(entry)
43     save_json(COORDS_FILE, data)
44     print(f"Saved: {entry}")
45     time.sleep(0.5)
46
47 # ----- Step 2: Define Image Region -----
48 def define_image_region():
49     print("Move cursor to top-left of image region and press ENTER.")
50     while not keyboard.is_pressed('enter'):
51         time.sleep(0.01)
52     x1, y1 = pyautogui.position()

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53     print(f"Top-left corner: ({x1}, {y1})")
54     time.sleep(0.5)
55
56     print("Move cursor to bottom-right of image region and press ENTER.")
57     while not keyboard.is_pressed('enter'):
58         time.sleep(0.01)
59     x2, y2 = pyautogui.position()
60     print(f"Bottom-right corner: ({x2}, {y2})")
61
62     left = min(x1, x2)
63     top = min(y1, y2)
64     width = abs(x2 - x1)
65     height = abs(y2 - y1)
66     region = [left, top, width, height]
67
68     save_json(REGION_FILE, region)
69     print(f"Region saved: {region}")
70     time.sleep(0.5)
71
72     # ----- Step 3: Wait for Exact Image Match with OpenCV -----
73     def wait_for_image(region):
74         print("Waiting for exact confirmation image...")
75         template1 = cv2.imread(IMAGE_PATH, cv2.IMREAD_GRAYSCALE)
76         template2 = cv2.imread(IMAGE_PATH_FALLBACK, cv2.IMREAD_GRAYSCALE)
77         if template1 is None and template2 is None:
78             print(f"Error: Could not read {IMAGE_PATH} or {IMAGE_PATH_FALLBACK}")
79             return
80         w1, h1 = template1.shape[:,-1] if template1 is not None else (None, None)
81         w2, h2 = template2.shape[:,-1] if template2 is not None else (None, None)
82         while True:
83             screenshot = pyautogui.screenshot(region=region)
84             screenshot = cv2.cvtColor(np.array(screenshot), cv2.COLOR_RGB2GRAY)
85             match_found = False
86             if template1 is not None:
87                 res1 = cv2.matchTemplate(screenshot, template1, cv2.TM_CCOEFF_NORMED)
88                 min_val1, max_val1, min_loc1, max_loc1 = cv2.minMaxLoc(res1)
89                 if max_val1 >= MATCH_THRESHOLD:
90                     print("Primary image match found.")
91                     match_found = True
92             else:
93                 print(f"Primary match value: {max_val1:.4f} (waiting...)")
94             if not match_found and template2 is not None:
95                 res2 = cv2.matchTemplate(screenshot, template2, cv2.TM_CCOEFF_NORMED)
96                 min_val2, max_val2, min_loc2, max_loc2 = cv2.minMaxLoc(res2)
97                 if max_val2 >= MATCH_THRESHOLD:
98                     print("Fallback image match found.")
99                     match_found = True
100             else:
101                 print(f"Fallback match value: {max_val2:.4f} (waiting...)")
102             if match_found:
103                 break
104             time.sleep(0.2)
105
106     # ----- Step 4: Perform Clicks -----
107     def perform_clicks():

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108     coords = load_json(COORDS_FILE, [])
109     region = load_json(REGION_FILE, None)
110
111     if not coords:
112         print("No saved coordinates.")
113         return
114     if not region:
115         print("Image region not defined.")
116         return
117
118     for entry in coords:
119         x, y = entry['x'], entry['y']
120         label = entry['label']
121
122         pyautogui.moveTo(x, y)
123
124         if label.lower() == 'slots':
125             print(f"Left-clicking on Slots at ({x}, {y})")
126             pyautogui.click(button='left')
127         elif label.lower() == 'gem':
128             print(f"Right-clicking on Gem at ({x}, {y})")
129             pyautogui.rightClick()
130             wait_for_image(region)
131         else:
132             print(f"Unknown label '{label}', skipping...")
133
134         time.sleep(0.3)
135
136     # ----- Main Listener -----
137     print("Script Ready")
138     print("- : Capture point")
139     print("p : Define image region")
140     print("ENTER : Start automation")
141     print("ESC : Quit")
142
143     while True:
144         if keyboard.is_pressed('-'):
145             record_point()
146         elif keyboard.is_pressed('p'):
147             define_image_region()
148         elif keyboard.is_pressed('enter'):
149             perform_clicks()
150             print("Automation finished. Press ENTER again to restart or ESC to quit.")
151             # Wait for ENTER to be released before allowing another run
152             while keyboard.is_pressed('enter'):
153                 pass
154         elif keyboard.is_pressed('esc'):
155             print("Exiting...")
156             break
157         time.sleep(0.1)

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