# **Egypt Landmark Recognition - User Guide**

# **OPURPOSE**

This application uses your computer camera to detect famous Egyptian landmarks (like the Pyramids, Sphinx, etc.) and display a short description for each one.

### Requirements

Make sure you have the following:

- Python installed on your computer
- A camera (built-in or USB)
- The following Python libraries:

pip install opency-python ultralytics

- The following files:
- best.pt your trained YOLO model
- dis.json a JSON file containing landmark descriptions
- The Python script itself

### How to Run

- 1. Open a terminal or your code editor (like VS Code)
- 2. Run the script using:

python EGYPT.py

## **Controls**

Key	Action
Space	Capture the current frame and run landmark detection
S	Save a snapshot image with the detected landmark's name
ESC	Exit the application
Any other	Unfreeze and return to live camera view

## **Output Behavior**

- Landmark detected: Name and description are shown in a pop-up window (Result)
- XNo landmark: Shows "No landmark detected."

# **Saving Snapshots**

- After pressing Space to freeze and detect a landmark, press s to save the image.
- Image name format:

snapshot\_YYYYMMDD\_HHMMSS\_LANDMARKNAME.jpg

#### **Notes**

- The script detects and displays **only the first recognized landmark** in the frame.
- Descriptions are pulled from dis.json. Make sure each class name in your model exists in the ISON.
- Pressing ESC will cleanly exit and close all windows.

### **API (Flask Backend)**

This project includes a Flask-based backend that allows external apps (like a mobile app) to send images and receive landmark detection results.

#### How to Run the API

python detect\_api.py

Make sure the following files are in the same directory:

- best.pt (YOLO model weights)
- dis.json (landmark descriptions)
- detect\_api.py (the script itself)

## **Endpoint**

• POST /detect

#### **%** Request

Send an image as form-data with the key "image"

### Response (if detection succeeds)

```
{
  "landmark": "Sphinx",
  "description": "The Great Sphinx of Giza is...",
  "image": "base64-encoded-image"
}
```

### Response (if no detection)

```
{
  "landmark": null,
  "description": "No landmark detected."
}
```

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