AI Photo Organizer: The Complete User Guide

Welcome to your new AI-powered Photo Organizer! This tool helps you automatically sort your digital photos based on dates, locations, and the people in them. This guide will walk you through the entire process, from a one-time setup to organizing your first folder of photos.

First-Time Setup (Do This Only Once)

This process gets the tool ready to use on your computer. It involves two parts: a quick manual installation of some system tools, followed by our automated setup script.

Part 1: System Prerequisites

The powerful face recognition AI needs some basic system tools to work. This is the only manual part of the setup.

On Windows:

- **Install Python:** If you don't have it, download it from python.org. During installation, you **must check the box that says "Add Python to PATH"**.
- **Install C++ Tools:** The AI needs a C++ compiler. The easiest way is to install Visual Studio Community. When the installer runs, select the **"Desktop development with C++"** workload and click "Install".
- **Install CMake:** Download and run the installer from cmake.org/download/.

On macOS:

1. Open the **Terminal** app.
2. Copy and paste the two commands below, one after the other, pressing Enter after each one. The first command installs Homebrew (a package manager), and the second installs the required tool.
   Bash
   ```
   /bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"
   ```

   Bash
   ```
   brew install cmake
   ```

On Linux (Ubuntu/Debian):

1. Open your **Terminal**.
2. Copy and paste the command below and press Enter. It will install all the necessary build tools.
   Bash
   ```
   sudo apt-get update && sudo apt-get install build-essential cmake libopenblas-dev liblapack-dev libjpeg-dev python3-venv
   ```

Part 2: Automated Project Setup

Now that the system tools are ready, our automated script will handle the rest.

1. Unzip the AI-AGENT-AS-A-LOCAL-PHOTO-ORGANIZER folder to a location you like (e.g., your Desktop or Documents).
2. **On Windows:** Simply navigate into the folder and double-click the setup.bat file. A command window will appear, install everything, and close when it's done.
3. **On macOS / Linux:**
    - Open a **Terminal** inside the project folder.
    - First, make the scripts executable by running this command:
      Bash
      `chmod +x setup.sh run.sh`
    - Now, run the setup script:
      Bash
      `./setup.sh`

The script will create a self-contained Python environment and download all the required libraries. Once it says "SETUP COMPLETE", you are ready to use the tool!

How to Use the Photo Organizer

Using the tool is a two-step process:

1. **Enroll Faces:** Teach the AI who to look for.
2. **Organize Photos:** Run the main organizer to sort your pictures.

Step 1: Enrolling Faces (Teaching the AI)

You need to provide sample photos so the AI can learn to recognize people.

1. Navigate into the Enrollment folder.
2. For each person you want the AI to recognize, create a new folder inside Enrollment. Name the folder after the person (e.g., John Smith, Grandma Jane).
3. Place several clear photos of that person inside their corresponding folder. The more photos you provide, the more accurate the recognition will be!

Example Structure:

```
Enrollment/
├── John Smith/
│   ├── john1.jpg
│   └── john_at_beach.png
└── Grandma Jane/
    ├── grandma_2022.jpg
    └── grandma_and_me.jpg
```

Now, run the enrollment script:

- **On Windows:** Double-click run.bat. When the command window asks for input, type enroll and press Enter.
- **On macOS / Linux:** In your terminal (inside the project folder), run:
  Bash
  ./run.sh enroll

The script will analyze all the photos and create a face_encodings.pkl file inside the facial recognition model (local) folder. This file is your trained AI model. You only need to re-run this enrollment step when you want to add new people.

Step 2: Organizing Your Photos

Once your faces are enrolled, you can organize any folder of photos.

Run the main organizer script:

- **On Windows:** Double-click run.bat. When prompted, type organize and press Enter.
- **On macOS / Linux:** In your terminal, run:
  Bash
  ./run.sh organize

The script will ask you a series of questions in the terminal:

1. **Source and Destination:** Tell it which folder of photos to organize and where to put the sorted results.
2. **Presets:** It will offer to save your source/destination paths as a preset, so you can quickly select them next time. These presets are saved as .json files in the new presets folder.
3. **Sorting Method:** Choose how you want to sort:
   - **Standard Sort:** Organizes all photos by one rule (Date, Location, or People).
   - **Hybrid Sort:** Perfect for isolating a specific event. For example, you can create a special folder for "Photos of John Smith from 2023" and have all other photos sorted by date.
   - **Find & Group:** This is a search tool. It finds and copies all photos that match a set of criteria (e.g., "Photos of Jane OR John in Paris") into a single new folder, leaving your original files untouched.

Just follow the on-screen prompts. A progress bar will show the status, and a detailed log file will be created in your destination folder when the process is complete.

That's it! You are now ready to bring order to your photo collection 🎉