**Spoof Detection Project**

Welcome to the Spoof Detection Project! This project is designed to register and recognize images using a simple API setup. Follow the steps below to set up and run the code on your local machine.

**Prerequisites**

Before you begin, ensure you have the following installed:

* Python (version 3.12 or higher)
* Visual Studio Code (or any preferred code editor)
* [Postman](https://www.postman.com/downloads/) for API testing

**Run Steps**

**Step 1: Open the Code**

1. Launch **Visual Studio Code** (VS Code).
2. Open the main.py file located in the project directory.

**Step 2: Configure IP Address and Port**

1. Scroll to the bottom of the main.py file.
2. Locate the section where the **IP address** and **port number** are defined.
3. Update these values based on your PC's configuration:
   * **Default Example**: 192.168.0.160 (IP) and 1200 (Port).
   * **How to Find Your IP Address**:
     + Open the **Command Prompt** (CMD) on your PC.
     + Type ipconfig and press Enter.
     + Look for the IPv4 Address under your active network connection (e.g., 192.168.x.x).
4. Save the changes to main.py.

**Step 3: Set Up Postman for Registration**

1. Open **Postman**.
2. Set the request method to **POST**.
3. Enter the following URL:

http://192.168.0.160:1200/register

*(Replace 192.168.0.160 and 1200 with your configured IP and port if different.)*

**Step 4: Configure the Request Body**

1. In Postman, go to the **Body** tab.
2. Select the **form-data** option.
3. Add the following key-value pairs:

| **Key** | **Value** | **Notes** |
| --- | --- | --- |
| collectionId | DEMO1 | Collection identifier |
| threshold | 0.5 | Recognition threshold |
| image | *(Select File)* | Upload an image file |
| name | *(Type a name)* | Name for the image |

1. Double-check your entries against the provided screenshot (if available).

**Step 5: Register the Image**

1. Click the **Send** button in Postman.
2. The code will execute, and the image will be registered in the system.
3. Check the response in Postman for confirmation.

**Step 6: Test Image Recognition**

1. In Postman, update the URL to:

http://192.168.0.160:1200/recognize

*(Ensure the IP and port match your configuration.)*

1. Go to the **Body** tab and keep the **form-data** settings.
2. Set the image key and upload a new image file for recognition (leave other fields as optional).
3. Click the **Send** button.
4. The response will display the recognition result based on the accuracy threshold.

**Troubleshooting**

* **Port Conflict**: If the port is in use, try a different port number (e.g., 1201) and update it in both main.py and Postman.
* **IP Issues**: Ensure your IP address matches your local network configuration.
* **No Response**: Verify that main.py is running in VS Code before sending requests in Postman.

**Notes**

* The current setup assumes a local server running on your machine.
* Adjust the threshold value (e.g., 0.5) to fine-tune recognition accuracy as needed.

**Contributing**

Feel free to fork this project, submit issues, or contribute enhancements via pull requests!