README

HCI Lab 2: Information Retrieval

1. Enivronment

- **Pycharm** Community Edition 2022.2.2
- **Windows** 11 Home Chinese Edition
- **Python** Interpreter Version 3.8.16

Please `download` these packages to configure your python enviroment before you use it.

```
Flask
PyQt5
numpy
tensorflow
Flask-HTTPAuth
scipy
imageio
```

2. Usage

1. Download the code provided by the teacher. Unzip the package.

   (After a reminder from a classmate，change all the sentence "C:\Users\Ying\AppData\Local\Programs\Python\Python39\python.exe" appears in `.idea/workspace.xml` *into "" .)*

2. Use my file of the same name to replace the following files in the unpacked installation package:

   a. `server/image_vectorizer.py`

      Used to extract features from dataset and save it on the distination.

   b. `server/rest-server.py`

      Basic level of validation is also being done in this file. And it also sends data generated by the back-end to the front-end.

   c. `server/search.py`

      This file implements the image search/retrieva.

   d. `server/templates/main.html`

      This is the front-end interface I designed.

3. Run `server/image_vectorizer.py`,this may takes a few minutes.
4. Run `server/rest-server.py`.

5. After starting up the server, you can access the UI by navigating to the URL (e.g. *http://127.0.0.1:5000*) and proceed to upload a file to generate 9 similar images.
6. Next, you can choose whether to show only the images you like (the ones with the heart highlighted) or filter the images by the six tags given.

3. Screenshots