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.

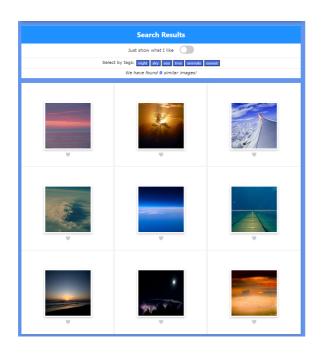
- 3. Run server/image_vectorizer.py, this may takes a few minutes.
- 4. Run server/rest-server.py.

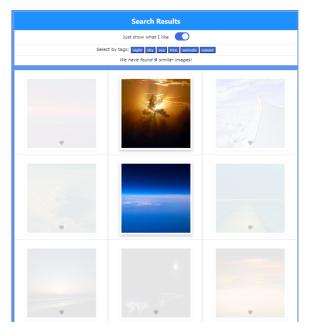
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- 5. After starting up the server, you can access the UI by navigating to the URL (e.g. http://127.0.0.1:5000) and proceed to upload a file to generate 9 similar images.
- 6. Next, you can choose whether to show only the images you like (the ones with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

3. Screenshots







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