

1. A short description of the overall project in your own words. (200 words or less)

The project contains two main programs to do CBIR (content based image retrieval) task. In addition, the third program in gui folder is underdevelopment for gui interface. The first program records pictures' feature vector into csv files. Different feature type has different csv file. Each row of csv file has a name in the first column, and floats representing features in the rest of columns. The second program reads all features from csv files, and compare features according to feature types. In the end the program will output n number of most similar pictures to the terminal.

2. Any required images along with a short description of the meaning of the image.

You can just run generator and comparator in order the final results will show up on terminal.

3. A description and example images of any extensions.
the extension is a gui interface.

4. A short reflection of what you learned.

I learned how to configure Xcode environments by using xcconfig files and keywords in xcode project. C++'s way of accessing csv files. the meanings of feature vector, and how to construct different types of histograms and compress them into feature vector.

5. Acknowledgement of any materials or people you consulted for the assignment.

I consulted professor's lecture note

https://docs.google.com/presentation/d/18J2DUjVvTxXGUA2XnXRJ_rTz1eWuLPC0xCjzUrHCtxc/edit#slide=id.g200e133f48f_0_63

and additional posts on stackoverflow, Wikipedia