FaceSearch User Guide

To install FaceSearch for the first time:

Please ask Dan to install it on your machine as there are a number of things that will need to be set up.

To update an existing copy:

1) Go to your C:\Program Files\FaceSearch folder and move the CollectionID.txt file elsewhere on your machine.
2) Delete your C:\Program Files\FaceSearch folder.
3) Copy the FaceSearch folder next to this user guide and paste it into your C:\Program Files folder.
4) Move the CollectionID.txt file back into the C:\Program Files\FaceSearch folder.

Usage:

Double click the FaceSearch desktop icon. The program will guide you through the process but if you would like further explanation, please see below.

Path to the query image directory
This is referring to the folder containing the images with the faces that you are trying to find matches for. Copy the full path from your explorer window and paste it here.

Path to the database image directory
This is referring to the folder containing the images that you are hoping to be returned as matches to your query images. Copy the full path from your explorer window and paste it here.

Note: All images contained within sub-folders in both the query and database folders will be detected.

You will then be asked if you want to select Standard or Custom mode. Standard is fine for most uses. It will return only the best match for each query image, with a similarity threshold of 80% and a maximum face count of 40. If you select Standard mode, the program will begin looking for matches, then add everything it found into a new ‘Matches’ folder, contained within the Query folder.

If you select Custom mode, you will be asked three further questions.
Please see the next page for information on Custom mode.

Return mode
Option one will result in every possible match that is above the similarity threshold being returned. Option two will result in only the match with the highest similarity being returned, so long as it is above the similarity threshold.

Similarity threshold
When a potential match is detected, a similarity value is assigned to it. You have control over the threshold beneath which images can be excluded from the output. For example, if the threshold is set to 90%, then an image which scored 92% similarity would be returned to you but an image which scored 85% would be silently ignored. A higher similarity threshold reduces the number of incorrect matches, but may result in fewer correct matches being detected. A lower value allows more matches to be detected, but can include a greater number of incorrect matches.

The recommended values are 99 when you want to avoid detecting the wrong people and 80 when you want a high chance of finding someone, without too many spurious matches. No value is likely to be perfect for every scenario so you should experiment.

Maximum number of faces
You have control over how many faces in each database image are included as candidates for recognition. This is useful in situations where you have images containing multiple people. If you have a high maximum faces setting, then even people who are far in the background of an image could be returned as matches, which may be undesirable if you were only looking for the ‘main’ subject of an image.

The faces are always considered in size order, with larger faces given highest priority. If you choose a maximum number of faces of one, then only the largest face, or analogously the closest face to the camera, will be considered for recognition.

Once all inputs are complete, the program will begin making downsized copies of the images contained in the database and query folders provided. This is because they have to be uploaded to AWS, which only accepts images below a certain size.

It will then ‘Index’ the database images into a ‘collection’. This simply means that they are uploaded to AWS, where they are analysed, and any face information is stored.

The query images are then presented to AWS which returns all compatible matches it found in that collection.

The collection is emptied and the downsized copies are deleted.

Any matches that were found will be saved into a new ‘Matches’ folder contained within the Query folder. They will be named as a concatenation of the Query image file name and the Database image file name, separated by an underscore.