

COEN352 Project Inputs and Outputs

For Option 1:

The input would be an image(both input.jpg and input.csv files, use the most appropriate one for you) along with a hamming distance(HD) per pixel(in the input.txt file). If $HD = 5$, then total HD for the vector = $5 * \text{number of pixels}$.

Find an effective hashing mechanism for the images and create a b+ tree to represent the images in the dataset. Use the b+ tree to search the images in the dataset effectively.

Your program should return all the images in the dataset within the given hamming distance from the input Image.

For Option 2:

Generate a random sorting algorithm and improve the algorithm to sort the given set of vectors.

The dataset has four different sets of vectors. Try to evolve the random sorting algorithm till it finds a best sorting algorithm to each set of the vectors. Your program should also assess the effectiveness and efficiency of the sorting algorithm.

Effectiveness = average distance from the complete sorted list.

Efficiency = number of non (n,n) swaps in the program.