Report – Final Exam

Approach:

- A feature vector set is prepared for all the provided expert gesture videos.
- Similarly, feature vector sets for all the testing videos which were shot for Assignment 2.

- For preparing feature vector set :
    - Extract a frame from the video (ex: middle frame)
    - Then extract feature vector for frame using provided cnn model
    - Store feature vector in a .csv file

- After, find feature vector set for both training and testing videos, use cosign similarity between training and testing videos and determine a vectors which have minimum cosign difference.
- Use label of train feature vector set to predict the gesture of test video

Solution:

- Input training videos are kept in ‘traindata’ folder.
- Middle frame is extracted for each ‘traindata’ video and kept in ‘traindata/frames’ path.
- Videos to be predicted are kept in ‘test’ folder.
- Middle frame is extracted for each ‘test video and kept in ‘test/frames’ path.
- Feature vector set for each frames in traindata and test folders are saved in 'training_vector.csv' and 'test_vector.csv'
- Cosine similarity is derived and the train and testing vectors with minimum cosine difference is given corresponding label (gesture number).
- Gesture numbers are saved to Results.csv