**CS498 AMO Homework 4**

Team :

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**1. Page 1 (40 pts)** **Experiment table**

Table listing the experiments carried out with the following columns. Size of the fixed length sample Overlap (0-X%) K-value Classifier Accuracy. We expect you to have tried at least 2 values of K and at least 2 different lengths of the windows for quantization. Note: For K-means please also list if you used standard K-means or hierarchical.

**2. Page 2 (28 pts) Histograms**

Histograms of the mean quantized vector (Histogram of cluster centres like in the book) for each activity with the K value that gives you the highest accuracy. (Please state the K value)

**3. Page 3 (22 pts)** **Confusion matrix**

Class confusion matrix from the classifier that you used. Please make sure to label the row/colums of the matrix so that we know which row corresponds to what.

**4. Page 4 (10 pts)** **A screenshot of your code**

The page should contain snippets of code demonstrating:

    i) Segmentation of the vector

    ii) K-means

    iii) Generating the histogram

    iv) Classification

**5. Page 5+ Screenshots of all your souce code.**

**Libraries used & Reference:**

**David Forsyth’s book** - Applied Machine Learning

**Trevor Walker’s lecture and sample code** – CS-498 Lecture videos

**csv** – for reading data from csv format: <https://docs.python.org/3/library/csv.html>

**Numpy** - <http://www.numpy.org/>