**CSE 535 Fall 2018 Mobile Computing Assignment 2**

**Due Date:**

**Points: 100**

**Group Submission**

In this assignment, you will build upon assignment 1 learn and predict American Sign Language.

You will be provided with data (excel sheets) that represents the extracted features of signs. The excel sheets represents the words **about** and **father** and your job is to train a classifier to recognize if a word is “**about**” or “**father**”.

(Note: use only facial and arms [shoulders, elbows, wrists] features and ignore the rest. Also ignore the score of each feature).

Your job is to build a machine learning algorithm that uses the data to learn ASL.

You can use MATLAB’ to build your model (we recommend using SVM or DecisionTree, but if you want to use another machine learning algorithm, feel free to do so). You can use Matlab’s apps/classificationLearner to learn the SVM/DecisionTree model.

Your model can be user specific.

You can then extract the model and use it in an android mobile app to predict new data.

It is up to you to specify the UI.

1. For the svm classifier, you can simply extract the weights and bias and feed them directly into your app.
2. For the decision tree, you can simply implement it using if else statements in your code.

The app should take an excel sheet as input. Extract the features and pass them into your model for prediction. The output should be the sign.

Perform also prediction on Matlab and show which performs better *PC vs Mobile*. Show timing of both.

Deliverables:

1. Code (Matlab and android).
2. Demo video showing working app, code walkthrough (matlab and android) [upload it to YouTube]
3. Readme file specifying group names, ids and YouTube links and any comments on the app.