**CSE 572 Data Mining Assignment 1**

**Due Date: February 9, 2018**

**Dumb Charades Project**

In this project, we will attempt to develop a computing system that can **understand** human gestures. There are a few components to understanding human gestures: a) identify known gestures, b) segment sequence of gestures, and c) identify unknown gestures. We will attempt to solve all three aspects. Note that this is only attempt and we do not expect a full solution yet.

In the first phase we will do data collection.

**(a) Phase one (Due February 2) – Data collection**

Task1 – Form a group of 5 and make an appointment for data collection.

Task 2 – Every person in the group should be familiar with the following list of signs.

Here is a list of ASL words. I picked them so that they usually occur in different regions.

ABOUT <https://www.signingsavvy.com/sign/ABOUT/32/1>

AND <https://www.signingsavvy.com/sign/AND/888/1>

CAN <https://www.signingsavvy.com/sign/CAN/524/1>

COP <https://www.signingsavvy.com/sign/COP/3203/1>

DEAF <https://www.signingsavvy.com/sign/DEAF/102/1>

DECIDE <https://www.signingsavvy.com/sign/DECIDE/781/1>

FATHER <https://www.signingsavvy.com/sign/FATHER/3440/1>

FIND <https://www.signingsavvy.com/sign/FIND/146/1>

GO OUT <https://www.signingsavvy.com/sign/GO+OUT>

HEARING <https://www.signingsavvy.com/sign/HEARING/3594/1>

HERE <https://www.signingsavvy.com/sign/HERE/192/1>

HOSPITAL <https://www.signingsavvy.com/sign/HOSPITAL/197/1>

IF <https://www.signingsavvy.com/sign/IF/3644/1>

CAT <https://www.signingsavvy.com/sign/CAT/528/1>

COST <https://www.signingsavvy.com/sign/CAT/528/1>

DAY <https://www.signingsavvy.com/sign/DAY/539/1>

GOLD <https://www.signingsavvy.com/sign/GOLD/1410/1>

GOOD NIGHT <https://www.signingsavvy.com/sign/GOOD%20NIGHT/6119/1>

HURT <https://www.signingsavvy.com/sign/GOOD%20NIGHT/6119/1>

LARGE <https://www.signingsavvy.com/sign/LARGE/3769/1>

Task 3 –When each group comes to the iMPACT lab at the appointed time, TA will provide the devices and software for the data collection. Each group should designate one person who will be recorded while gesturing. There are three parts to this task:

Part a) The person who is gesturing should do each of the gestures 40 times and each gesture should be done within 5 s.

Part b) The group should make 5 sentences combining the words in the list and the designated person should sign the 5 sentences once every sentence. Each sentence should be signed within a time window of 20 s.

Part c) The TA will give the designated person a sentence which may or may not have words from the list. The person has to explain other people in the group by doing gestures. The person should keep trying until one person from the group understands the sentence.

**Achievable full credit for Phase 1 - 100**

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| **Condition** | **Grade deductions** |
| 1. **Made an appointment in time** 2. **Collected data** 3. **No wrong gestures** 4. **No wrong sentences** | **0** |
| **No data collection** | **100** |
| **No-show in appointed time or late** | **30** |
|  |  |

**The TA will post time schedule for data collection soon.**