## **Dataset creation Steps:**

- 1. We take the raw data folder and execute the create\_train\_test\_folder.m file with the reference of the downloaded raw data folder. This execution created two folders 'train' and 'test' which contains the csv files for those 10 actions from DM01-DM37.
- 2. As we did for Assignment 3:
  - we generated a folder called 'processed\_data' which had 10 .csv files for each action. Each of these files was a vertical concatenation of data for each action done 20 times. This was done by running the file called 'processData.m'.
  - □ We generated all the features and performed PCA analysis on the 'processed\_data' folder using the file called 'pca\_file\_generator.m' with source directory as processed\_data. Later we multiplied the PCA output with the PCA input for each of the 10 actions separately and generated files named such as 'pca\_ABOUT.csv' in a separate folder called 'pca\_data'. The pca for each of these files generated a 121X121 table which was multiplied with the pca input containing number\_of\_rowsX121 table for each action.
  - Now we executed the file called 'model\_dataset.m' from source directory pca\_data which concatenated all the pca\_ABOUT.csv, pca\_CAN.csv, etc file data (i.e. all the 10 action files pca data) into one from the pca\_data folder. 10 copies of this was made such that each file was named in the format all\_data\_ABOUT.csv (this is an example) which had labels assigned to it in the 122nd column such that if the file was for ABOUT action, 1 was assigned to the row or else 0.
  - □ Lastly, in order to get the shuffled dataset for each action, we read data form each of the files like all\_data\_ABOUT.csv files and randomly shuffled the rows to generate out final dataset which were named such as shuffle\_ABOUT.csv. This involved the execution of 'shuffle.m' file with source as pca\_data folder.
- 3. This process is repeated separately for test data and finally we get the shuffled data files. We then execute the 'final\_dataset.m' file which gives us 10 csv files of the format gesturename.csv (example ABOUT.csv). These files are used to run the classification algorithms to get the following results.

### **Decision Trees:**

name: 'ABOUT.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:05'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: ABOUT

The sensitivity/Recall is: 8.970359e-01

The specificity is: 4.061625e-02 The accuracy is: 7.923656e-01

The tpr is: 8.970359e-01 The fpr is: 9.593838e-01 The precision is: 8.703879e-01 The F1 score is: 8.835110e-01

name: 'AND.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:06'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: AND

The sensitivity/Recall is: 9.961766e-01

The specificity is: 6.350245e-01 The accuracy is: 9.584047e-01

The tpr is: 9.961766e-01 The fpr is: 3.649755e-01

The precision is: 9.589621e-01 The F1 score is: 9.772152e-01

name: 'CAN.csv'

folder: '/Users/nikitabahl/Downloads/CSE572 A2 data new copy/final dataset'

date: '30-Apr-2018 22:08:07'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: CAN

The sensitivity/Recall is: 6.978294e-01

The specificity is : 6.949153e-02 The accuracy is : 6.343718e-01

The tpr is: 6.978294e-01 The fpr is: 9.305085e-01

The precision is: 8.697200e-01 The F1 score is: 7.743503e-01

name: 'COP.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:08'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: COP

The sensitivity/Recall is: 8.977964e-01

The specificity is : 5.709343e-02 The accuracy is : 8.146183e-01

The tpr is: 8.977964e-01 The fpr is: 9.429066e-01

The precision is : 8.966041e-01 The F1 score is : 8.971998e-01

name: 'DEAF.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:09'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: DEAF

The sensitivity/Recall is: 7.097019e-01

The specificity is: 5.739130e-02 The accuracy is: 6.454981e-01

The tpr is : 7.097019e-01 The fpr is : 9.426087e-01

The precision is: 8.733645e-01 The F1 score is: 7.830732e-01

name: 'DECIDE.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:09'

bytes: 8474988 isdir: 0

datenum: 7.3718e+05

For gesture : DECIDE

The sensitivity/Recall is: 9.021285e-01

The specificity is: 1.500000e-01 The accuracy is: 8.274564e-01

The tpr is: 9.021285e-01 The fpr is: 8.500000e-01

The precision is: 9.059160e-01 The F1 score is: 9.040183e-01

name: 'FATHER.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:10'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: FATHER

The sensitivity/Recall is: 9.919051e-01

The specificity is : 5.660377e-02 The accuracy is : 9.070524e-01

The tpr is: 9.919051e-01 The fpr is: 9.433962e-01 The precision is: 9.133299e-01 The F1 score is: 9.509972e-01

name: 'FIND.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:11'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: FIND

The sensitivity/Recall is: 1
The specificity is: 5.989111e-02
The accuracy is: 9.113317e-01

The tpr is: 1

The fpr is: 9.401089e-01 The precision is: 9.108280e-01 The F1 score is: 9.533333e-01 name: 'HEARING.csv'

folder: '/Users/nikitabahl/Downloads/CSE572\_A2\_data\_new copy/final\_dataset'

date: '30-Apr-2018 22:08:12'

bytes: 8474988

isdir: 0

datenum: 7.3718e+05

For gesture: HEARING

The sensitivity/Recall is: 1
The specificity is: 5.253283e-02
The accuracy is: 9.135570e-01

The tpr is: 1

The fpr is: 9.474672e-01

The precision is: 9.131407e-01 The F1 score is: 9.545986e-01

#### SVM:

For SVM, run SVM Read on the final dataset

# OUTPUT:

>> SVM\_Read **GESTURE: ABOUT** DM · 11 Confusion Matrix: 182 0 0 23 For Gesture : ABOUT The Accuracy is: 100 The Precision is: 1 The Recall is : 1 The f1Score is : 1 DM:12 Confusion Matrix: 187 0 0 18 For Gesture : ABOUT The Accuracy is: 100 The Precision is : 1 The Recall is : 1 The f1Score is: 1 DM:13

Confusion Matrix:
186 0
0 19

For Gesture : ABOUT

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

DM : 14 Confusion Matrix: 176 0 22 7

For Gesture : ABOUT

The Accuracy is: 8.926829e+01 The Precision is: 1 The Recall is: 2.413793e-01 The f1Score is: 3.888889e-01

DM : 15 Confusion Matrix: 174 0 31 0

For Gesture : ABOUT

The Accuracy is : 8.487805e+01The Precision is : The Recall is : The f1Score is :

DM : 16 Confusion Matrix: 178 0 27 0

For Gesture : ABOUT

The Accuracy is : 8.682927e+01The Precision is : The Recall is : The f1Score is :

DM : 17 Confusion Matrix: 175 0 30 0

For Gesture : ABOUT

The Accuracy is : 8.536585e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 18 Confusion Matrix: 174 0 31 0

For Gesture : ABOUT

The Accuracy is : 8.487805e+01The Precision is : The Recall is : The f1Score is :

DM : 19 Confusion Matrix: 177 0 28 0

For Gesture : ABOUT

The Accuracy is : 8.634146e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 20 Confusion Matrix: 184 0 21 0

For Gesture : ABOUT

The Accuracy is : 8.975610e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 21 Confusion Matrix: 178 0 27 0

For Gesture : ABOUT

The Accuracy is : 8.682927e+01The Precision is : The Recall is : The f1Score is :

DM: 37 Confusion Matrix: The Accuracy is: 8.780488e+01 DM: 22 Confusion Matrix: 178 0 27 0 The Precision is : 0
The Recall is : 0 The f1Score is: 0 For Gesture : ABOUT For Gesture : ABOUT DM:30 The Accuracy is: 8.634146e+01 Confusion Matrix: 189 0 16 0 The Accuracy is: 8.682927e+01 The Precision is : 0 The Recall is : 0 The Precision is: 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 0 For Gesture : ABOUT GESTURE : AND DM : 23 Confusion Matrix: The Accuracy is : 9.219512e+01 The Precision is : 0 179 0 26 0 The Recall is: 0 Confusion Matrix: 185 0 0 20 For Gesture : ABOUT DM : 31 Confusion Matrix: For Gesture : AND The Accuracy is: 8.731707e+01 The Precision is : 0 The Recall is : 0 181 0 24 0 The Accuracy is: 100 The Precision is: 1 The f1Score is: 0 The Recall is: 1 The f1Score is: 1 For Gesture : ABOUT DM:24 The Accuracy is: 8.829268e+01 Confusion Matrix: 180 0 25 0 DM: 12 The Precision is: 0 Confusion Matrix: 182 0 0 23 The Recall is : 0 The f1Score is : 0 For Gesture : ABOUT DM:32 For Gesture : AND The Accuracy is : 8.780488e+01 Confusion Matrix: 179 0 26 0 The Precision is : 0 The Accuracy is: 100 The Recall is: 0 The Precision is: 1 The Recall is : 1 The f1Score is : 1 The f1Score is: 0 For Gesture : ABOUT The Accuracy is: 8.731707e+01
The Precision is: 0
The Recall is: 0 DM:25 Confusion Matrix: 177 0 28 0 DM:13 Confusion Matrix: The f1Score is: 0 For Gesture : ABOUT For Gesture : AND DM:33 The Accuracy is: 8.634146e+01 The Precision is: 0 Confusion Matrix: The Accuracy is: 100 The Precision is : 1
The Recall is : 1 The Recall is: 0 The f1Score is : 0 The f1Score is: 1 For Gesture : ABOUT DM: 26 The Accuracy is : 8.487805e+01 Confusion Matrix: DM:14 The Precision is: 0 Confusion Matrix: 189 0 13 3 179 0 26 0 The Recall is: 0 For Gesture : ABOUT DM : 34 Confusion Matrix: 187 0 For Gesture : AND The Accuracy is : 8.731707e+01 The Precision is: 0 The Accuracy is : 9.365854e+01 The Precision is : 1
The Recall is : 1.875000e-01 The Recall is : 0 18 0 The f1Score is: 0 The f1Score is: 3.157895e-01 For Gesture : ABOUT DM: 27 The Accuracy is : 9.121951e+01 Confusion Matrix: 188 0 17 0 The Precision is : 0
The Recall is : 0
The f1Score is : 0 DM: 15 Confusion Matrix: 184 0 21 0 For Gesture : ABOUT For Gesture : AND The Accuracy is : 9.170732e+01 Confusion Matrix: The Precision is: 0
The Recall is: 0 178 0 The Accuracy is : 8.975610e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 0 For Gesture : ABOUT DM:28 The Accuracy is: 8.682927e+01 Confusion Matrix: 180 0 The Precision is : 0
The Recall is : 0 DM:16 Confusion Matrix: 188 0 17 0 25 0 The f1Score is: 0 For Gesture : ABOUT For Gesture : AND DM:36 The Accuracy is: 8.780488e+01 The Precision is: 0 Confusion Matrix: The Accuracy is : 9.170732e+01 The Recall is : 0 The f1Score is : 0 25 0 The Precision is : 0
The Recall is : 0 The f1Score is : 0

For Gesture : ABOUT

The Precision is: 0

The Recall is: 0

The f1Score is : 0

The Accuracy is : 8.780488e+01

DM: 17

Confusion Matrix: 187 0 18 0

DM : 29 Confusion Matrix:

For Gesture : ABOUT

180 0

25 0

For Gesture : AND

The Accuracy is: 9.121951e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 18 Confusion Matrix: 184 0 21 0

For Gesture : AND

The Accuracy is: 8.975610e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 19 Confusion Matrix: 184 0 21 0

For Gesture : AND

The Accuracy is : 8.975610e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 20 Confusion Matrix: 178 0 27 0

For Gesture : AND

The Accuracy is: 8.682927e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 21 Confusion Matrix: 178 0 27 0

For Gesture : AND

The Accuracy is: 8.682927e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 22 Confusion Matrix: 174 0 31 0

For Gesture : AND

The Accuracy is : 8.487805e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 23 Confusion Matrix: 188 0 17 0

For Gesture : AND

The Accuracy is: 9.170732e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 24 Confusion Matrix: 184 0 21 0

For Gesture : AND

The Accuracy is: 8.975610e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 25 Confusion Matrix: 185 0 20 0

For Gesture : AND

The Accuracy is: 9.024390e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 26 Confusion Matrix: 178 0 27 0

For Gesture : AND

The Accuracy is : 8.682927e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 27 Confusion Matrix: 187 0 18 0

For Gesture : AND

The Accuracy is: 9.121951e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 28 Confusion Matrix: 185 0 20 0

For Gesture : AND

The Accuracy is : 9.024390e+01The Precision is : The Recall is : The f1Score is :

DM : 29 Confusion Matrix: 187 0 18 0

For Gesture : AND

The Accuracy is: 9.121951e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 30 Confusion Matrix: 184 0

For Gesture : AND

The Accuracy is: 8.975610e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 31 Confusion Matrix: 183 0 22 0

For Gesture : AND

The Accuracy is: 8.926829e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 32 Confusion Matrix: 180 0 25 0

For Gesture : AND

The Accuracy is: 8.780488e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 33 Confusion Matrix: 184 0 21 0

For Gesture : AND

The Accuracy is : 8.975610e+01The Precision is : The Recall is : The f1Score is :

DM : 34 Confusion Matrix: 186 0 19 0

For Gesture : AND

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 35 Confusion Matrix: 183 0 22 0

For Gesture : AND

The Accuracy is : 8.926829e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0

DM : 36 Confusion Matrix: 180 0 25 0

For Gesture : AND

The Accuracy is : 8.780488e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 37 Confusion Matrix: 178 0 27 0

For Gesture : AND

The Accuracy is: 8.682927e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

GESTURE : CAN

DM : 11 Confusion Matrix: 189 0 0 16

For Gesture : CAN

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

DM : 12 Confusion Matrix: 182 0 0 23

For Gesture : CAN

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

For Gesture : CAN DM:28 DM : 13 Confusion Matrix: Confusion Matrix: The Accuracy is : 9.073171e+01 The Precision is: 0 179 0 0 26 The Recall is: 0 The f1Score is : 0 For Gesture : CAN For Gesture : CAN DM:21 The Accuracy is: 8.829268e+01 Confusion Matrix: 185 0 20 0 The Accuracy is: 100 The Precision is: 0 The Precision is : 1
The Recall is : 1 The Recall is : 0 The f1Score is : 0 The f1Score is: 1 For Gesture : CAN DM : 29 Confusion Matrix: DM:14 The Accuracy is: 9.024390e+01 The Precision is : 0 The Recall is : 0 180 0 25 0 Confusion Matrix: 181 0 19 5 The f1Score is: 0 For Gesture : CAN For Gesture : CAN DM:22 The Accuracy is: 8.780488e+01 Confusion Matrix: 181 0 24 0 The Accuracy is : 9.073171e+01 The Precision is : 1 The Recall is : 2.083333e-01 The Precision is : 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 3.448276e-01 For Gesture : CAN DM:30 The Accuracy is: 8.829268e+01
The Precision is: 0
The Recall is: 0 Confusion Matrix: 185 0 20 0 DM: 15 Confusion Matrix: 21 0 The f1Score is : 0 For Gesture : CAN For Gesture : CAN DM · 23 The Accuracy is: 9.024390e+01 The Accuracy is : 8.975610e+01 Confusion Matrix: The Precision is : 0 The Recall is: 0 The Precision is: 0 The Recall is : 0 The f1Score is: 0 The f1Score is: 0 For Gesture : CAN DM:31 Confusion Matrix: 186 0 19 0 DM:16 The Accuracy is : 9.121951e+01 Confusion Matrix: The Precision is: 0 182 0 23 0 The Recall is : 0 The f1Score is : 0 For Gesture : CAN For Gesture : CAN DM:24 The Accuracy is: 9.073171e+01 Confusion Matrix: The Accuracy is: 8.878049e+01 The Precision is : 0 The Precision is : 0
The Recall is : 0 176 0 29 0 The Recall is : 0 The f1Score is : 0 The f1Score is : 0 For Gesture : CAN DM : 32 Confusion Matrix: DM: 17 The Accuracy is: 8.585366e+01 Confusion Matrix: 186 0 19 0 The Precision is : 0 The Recall is : 0 191 0 14 0 The f1Score is: 0 For Gesture : CAN For Gesture : CAN DM:25 The Accuracy is : 9.317073e+01 The Accuracy is : 9.073171e+01 Confusion Matrix: The Precision is: 0 The Precision is : 0
The Recall is : 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 0 For Gesture: CAN DM:33 DM:18 The Accuracy is: 8.780488e+01 Confusion Matrix: Confusion Matrix: 179 0 26 0 The Precision is : 0
The Recall is : 0 The f1Score is : 0 For Gesture : CAN For Gesture : CAN DM · 26 The Accuracy is : 9.170732e+01 Confusion Matrix: 183 0 22 0 The Precision is : 0
The Recall is : 0 The Accuracy is : 8.731707e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 0 For Gesture : CAN DM:34 The Accuracy is : 8.926829e+01 The Precision is : 0 Confusion Matrix: 189 0 DM: 19 Confusion Matrix: 184 0 21 0 The Recall is: 0 16 0 The f1Score is : 0 For Gesture : CAN For Gesture : CAN DM : 27 Confusion Matrix: 187 0 18 0 The Accuracy is: 9.219512e+01 The Precision is: 0 The Accuracy is: 8.975610e+01 The Precision is : 0
The Recall is : 0 The Recall is : 0 The f1Score is : 0 The f1Score is : 0 For Gesture : CAN DM : 35 Confusion Matrix:

The Accuracy is : 9.121951e+01

190 0

For Gesture : CAN

The Precision is: 0

The Recall is : 0 The f1Score is : 0

DM: 20

Confusion Matrix: 186 0 19 0

For Gesture : COP The Accuracy is: 9.268293e+01 The Precision is : 0
The Recall is : 0 DM : 16 Confusion Matrix: The Accuracy is: 8.731707e+01 The Precision is: 0 The f1Score is: 0 185 0 20 0 The Recall is : 0 The f1Score is : 0 DM:36 For Gesture : COP Confusion Matrix: 190 0 15 0 DM : 24 Confusion Matrix: The Accuracy is: 9.024390e+01 The Precision is : 0
The Recall is : 0 181 0 24 0 The f1Score is: 0 For Gesture : CAN For Gesture : COP The Accuracy is : 9.268293e+01 The Precision is : 0 DM: 17 The Accuracy is: 8.829268e+01 Confusion Matrix: 186 0 The Precision is : 0 The Recall is : 0 The Recall is: 0 The f1Score is : 0 The f1Score is: 0 19 0 DM : 37 Confusion Matrix: For Gesture : COP DM: 25 The Accuracy is : 9.073171e+01 The Precision is : 0 180 0 25 0 Confusion Matrix: The Recall is: 0 The f1Score is: 0 For Gesture : CAN For Gesture: COP The Accuracy is: 8.780488e+01 The Accuracy is : 8.926829e+01 The Precision is : 0 The Recall is : 0 The Precision is : 0 The Recall is : 0 DM: 18 Confusion Matrix: The f1Score is: 0 26 0 The f1Score is: 0 GESTURE : COP For Gesture : COP DM · 26 DM:11 The Accuracy is : 8.731707e+01 Confusion Matrix: Confusion Matrix: 180 0 25 0 The Precision is: 0 180 0 The Recall is: 0 0 25 The f1Score is: 0 For Gesture : COP For Gesture : COP DM:19 The Accuracy is : 8.780488e+01 Confusion Matrix: The Accuracy is: 100 The Precision is: 0 The Precision is : 1 The Recall is : 1 179 0 26 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 1 For Gesture : COP DM: 27 Confusion Matrix: DM:12 The Accuracy is: 8.731707e+01 The Precision is : 0
The Recall is : 0 185 0 20 0 Confusion Matrix: 182 0 The f1Score is : 0 For Gesture : COP For Gesture : COP DM:20 The Accuracy is: 9.024390e+01 Confusion Matrix: 191 0 14 0 The Accuracy is: 100 The Precision is : 0 The Recall is : 0 The Precision is : 1
The Recall is : 1 The f1Score is : 0 The f1Score is : 1 For Gesture : COP DM:28 Confusion Matrix: 182 0 23 0 DM: 13 The Accuracy is: 9.317073e+01 Confusion Matrix: 184 0 The Precision is : 0
The Recall is : 0 0 21 The f1Score is: 0 For Gesture : COP For Gesture : COP DM:21 The Accuracy is: 8.878049e+01 Confusion Matrix: 185 0 20 0 The Accuracy is: 100 The Precision is : 0 The Precision is: 1 The Recall is: 0 The Recall is : 1 The f1Score is : 1 The f1Score is : 0 For Gesture : COP DM · 29 Confusion Matrix: 184 0 21 0 DM: 14 The Accuracy is : 9.024390e+01 Confusion Matrix: The Precision is: 0 189 0 12 4 The Recall is : 0 The f1Score is : 0 For Gesture : COP For Gesture : COP The Accuracy is : 8.975610e+01 The Precision is : 0 DM · 22 The Accuracy is : 9.414634e+01 Confusion Matrix: The Precision is : 1 The Recall is : 2.500000e-01 184 0 21 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 4.000000e-01 For Gesture : COP DM : 30 Confusion Matrix: DM: 15 The Accuracy is: 8.975610e+01 Confusion Matrix: 192 0 13 0 The Precision is : 0
The Recall is : 0 184 0 21 0 The f1Score is : 0

DM: 23

Confusion Matrix: 179 0 26 0

For Gesture : COP

The Precision is : 0

The Recall is : 0 The f1Score is : 0

The Accuracy is : 9.365854e+01

For Gesture : COP

The Precision is : 0 The Recall is : 0

The f1Score is : 0

The Accuracy is: 8.975610e+01

For Gesture : GOOUT DM:31 Confusion Matrix: 183 0 22 0 DM : 19 Confusion Matrix: The Accuracy is: 100 The Precision is : 1 The Recall is : 1 192 0 13 0 The f1Score is: 1 For Gesture : COP For Gesture : GOOUT The Accuracy is: 8.926829e+01 DM:12 The Accuracy is : 9.365854e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 Confusion Matrix: 186 0 The Precision is : 0
The Recall is : 0 The f1Score is: 0 DM : 32 Confusion Matrix: For Gesture : GOOUT DM:20 The Accuracy is : 100 The Precision is : 1 Confusion Matrix: 190 0 15 0 187 0 18 0 The Recall is · 1 For Gesture : COP For Gesture : GOOUT The Accuracy is : 9.121951e+01 The Accuracy is : 9.268293e+01 The Precision is : 0 The Precision is : 0 The Recall is : 0 DM · 13 Confusion Matrix: The f1Score is: 0 The Recall is: 0 0 15 The f1Score is: 0 DM:33 For Gesture : GOOUT DM:21 Confusion Matrix: Confusion Matrix: 188 0 17 0 187 0 18 0 The Accuracy is: 100 The Precision is: 1 The Recall is : 1 The f1Score is : 1 For Gesture : COP For Gesture : GOOUT The Accuracy is: 9.121951e+01 DM : 14 Confusion Matrix: The Precision is: 0
The Recall is: 0 The Accuracy is : 9.170732e+01 The Precision is: 0 The f1Score is: 0 180 0 The Recall is: 0 The f1Score is: 0 18 7 For Gesture : GOOUT DM:34 Confusion Matrix: 187 0 18 0 DM:22 The Accuracy is : 9.121951e+01 Confusion Matrix: The Precision is : 1 The Recall is : 2.800000e-01 183 0 22 0 The f1Score is: 4.375000e-01 For Gesture : COP For Gesture : GOOUT The Accuracy is: 9.121951e+01 The Precision is: 0 DM:15 The Accuracy is: 8.926829e+01 Confusion Matrix: The Precision is : 0
The Recall is : 0 The Recall is: 0 The f1Score is : 0 The f1Score is : 0 15 0 DM:35 For Gesture : GOOUT Confusion Matrix: DM:23 Confusion Matrix: 192 0 13 0 184 0 21 0 The Accuracy is: 9.268293e+01 The Precision is : 0 The Recall is: 0 The f1Score is : 0 For Gesture : COP For Gesture : GOOUT The Accuracy is : 8.975610e+01 The Precision is: 0 DM: 16 The Accuracy is: 9.365854e+01 Confusion Matrix: 183 0 22 0 The Precision is : 0
The Recall is : 0 The Recall is : 0 The f1Score is: 0 The f1Score is: 0 DM:36 For Gesture : GOOUT Confusion Matrix: 185 0 20 0 DM: 24 The Accuracy is : 8.926829e+01 Confusion Matrix: 180 0 25 0 The Precision is: 0 The Recall is : 0 The f1Score is : 0 For Gesture : COP For Gesture : GOOUT The Accuracy is: 9.024390e+01 The Precision is: 0
The Recall is: 0 DM: 17 The Accuracy is : 8.780488e+01 Confusion Matrix: The Precision is: 0 183 0 22 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 0 DM: 37 For Gesture : GOOUT Confusion Matrix: 185 0 DM: 25 The Accuracy is : 8.926829e+01 Confusion Matrix: The Precision is : 0 The Recall is : 0 185 0 20 0 20 0 The f1Score is: 0 For Gesture : COP For Gesture : GOOUT The Accuracy is : 9.024390e+01 The Precision is : 0 DM:18 The Accuracy is: 9.024390e+01 Confusion Matrix: 188 0 17 0 The Precision is : 0
The Recall is : 0 The Recall is: 0 The f1Score is : 0 GESTURE: GOOUT For Gesture : GOOUT

> The Accuracy is : 9.170732e+01The Precision is : 0The Recall is : 0

The f1Score is : 0

DM : 11 Confusion Matrix: 190 0 0 15 DM:26

Confusion Matrix: 184 0 21 0

For Gesture : GOOUT For Gesture : DEAF DM:34 Confusion Matrix: The Accuracy is : 8.975610e+01 The Accuracy is: 9.024390e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 The Precision is : 1 The Recall is : 3.333333e-01 The f1Score is: 5.000000e-01 For Gesture : GOOUT DM: 27 The Accuracy is: 9.024390e+01 The Precision is: 0 Confusion Matrix: DM:15 Confusion Matrix: 183 0 22 0 186 0 19 0 The Recall is: 0 The f1Score is : 0 For Gesture : GOOUT DM : 35 Confusion Matrix: For Gesture : DEAF The Accuracy is : 9.073171e+01 The Accuracy is : 8.926829e+01 The Precision is : 0 The Precision is : 0 The Recall is : 0 186 0 The f1Score is: 0 The Recall is : 0 The f1Score is : 0 For Gesture : GOOUT DM:28 The Accuracy is: 9.073171e+01 Confusion Matrix: 187 0 18 0 The Precision is : 0 The Recall is : 0 DM · 16 Confusion Matrix: The f1Score is : 0 185 0 20 0 For Gesture: GOOUT DM:36 For Gesture : DEAF The Accuracy is : 9.121951e+01 Confusion Matrix: 177 0 28 0 The Precision is : 0
The Recall is : 0 The Accuracy is: 9.024390e+01 The Precision is: 0 The f1Score is : 0 The Recall is : 0 The f1Score is : 0 For Gesture : GOOUT The Accuracy is: 8.634146e+01 DM · 29 Confusion Matrix: 183 0 22 0 DM : 17 Confusion Matrix: The Precision is: 0
The Recall is: 0 The f1Score is: 0 188 0 For Gesture : GOOUT For Gesture : DEAF DM:37 Confusion Matrix: The Accuracy is : 8.926829e+01 The Accuracy is : 9.170732e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 The Precision is : 0 The Recall is : 0 The f1Score is: 0 For Gesture : GOOUT DM:30 The Accuracy is : 9.268293e+01 Confusion Matrix: DM:18 The Precision is: 0 189 0 16 0 The Recall is : 0 Confusion Matrix: 186 0 19 0 The f1Score is : 0 For Gesture : GOOUT GESTURE : DEAF For Gesture : DEAF The Accuracy is: 9.219512e+01 The Precision is : 0 The Recall is : 0 DM:11 The Accuracy is: 9.073171e+01 Confusion Matrix: The Precision is : 0 The Recall is: 0 The f1Score is: 0 0 18 The f1Score is: 0 DM: 31 For Gesture : DEAF Confusion Matrix: 182 0 23 0 DM: 19 Confusion Matrix: 189 0 16 0 The Accuracy is: 100 The Precision is: 1 The Recall is : 1 The f1Score is : 1 For Gesture : GOOUT For Gesture : DEAF The Accuracy is : 8.878049e+01 The Precision is : 0 The Recall is : 0 DM : 12 Confusion Matrix: The Accuracy is : 9.219512e+01 The Precision is: 0 The f1Score is : 0 188 0 0 17 The Recall is : 0 The f1Score is : 0 DM · 32 For Gesture : DEAF Confusion Matrix: 179 0 26 0 DM:20 Confusion Matrix: The Accuracy is: 100 The Precision is : 1
The Recall is : 1 189 0 The f1Score is : 1 For Gesture : GOOUT For Gesture : DEAF The Accuracy is : 8.731707e+01 The Precision is : 0 The Accuracy is : 9.219512e+01 The Recall is : 0 The f1Score is : 0 Confusion Matrix: 187 0 0 18 The Precision is : 0 The Recall is : 0 The f1Score is: 0 DM: 33 For Gesture : DEAF Confusion Matrix: DM:21 Confusion Matrix: 184 0 21 0 179 0 26 0 The Accuracy is: 100 The Precision is : 1 The Recall is: 1

The f1Score is: 1

Confusion Matrix: 175 0 20 10

DM: 14

For Gesture : DEAF

The Precision is : 0

The Recall is : 0 The f1Score is : 0

The Accuracy is: 8.975610e+01

For Gesture : GOOUT

The f1Score is : 0

The Accuracy is: 8.731707e+01
The Precision is: 0
The Recall is: 0

DM: 22
Confusion Matrix:
191 0
14 0

For Gesture: DEAF
The Accuracy is: 9.317073e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 23 Confusion Matrix: 186 0 19 0

For Gesture : DEAF

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 24 Confusion Matrix: 188 0 17 0

For Gesture : DEAF

The Accuracy is : 9.170732e+01 The Precision is : 0 The Recall is : 0

DM : 25 Confusion Matrix: 187 0 18 0

The f1Score is: 0

For Gesture : DEAF

The Accuracy is: 9.121951e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 26 Confusion Matrix: 186 0 19 0

For Gesture : DEAF

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 27 Confusion Matrix: 182 0 23 0

For Gesture : DEAF

The Accuracy is : 8.878049e+01The Precision is : The Recall is : The f1Score is :

DM : 28 Confusion Matrix: 185 0 20 0

For Gesture : DEAF

The Accuracy is: 9.024390e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 29 Confusion Matrix: 176 0 29 0 For Gesture : DEAF

The Accuracy is : 8.585366e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0

DM : 30 Confusion Matrix: 174 0 31 0

For Gesture : DEAF

The Accuracy is: 8.487805e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 31 Confusion Matrix: 184 0 21 0

For Gesture : DEAF

The Accuracy is : 8.975610e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0

DM : 32 Confusion Matrix: 186 0

For Gesture : DEAF

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 33 Confusion Matrix: 184 0 21 0

For Gesture : DEAF

The Accuracy is : 8.975610e+01The Precision is : The Recall is : The f1Score is :

DM : 34 Confusion Matrix: 183 0 22 0

For Gesture : DEAF

The Accuracy is : 8.926829e+01The Precision is : The Recall is : The f1Score is :

DM : 35 Confusion Matrix: 186 0 19 0

For Gesture : DEAF

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 36 Confusion Matrix: 190 0 15 0

For Gesture : DEAF

The Accuracy is : 9.268293e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0 DM : 37 Confusion Matrix: 186 0 19 0

For Gesture : DEAF

The Accuracy is : 9.073171e+01The Precision is : 0The Recall is : 0The f1Score is : 0

GESTURE : DECIDE

DM : 11 Confusion Matrix: 191 0 0 14

For Gesture : DECIDE

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

DM : 12 Confusion Matrix: 192 0 0 13

For Gesture : DECIDE

The Accuracy is : 100 The Precision is : 1 The Recall is : 1 The f1Score is : 1

DM : 13 Confusion Matrix: 173 0 0 32

For Gesture : DECIDE

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

DM : 14 Confusion Matrix: 190 0 8 7

For Gesture : DECIDE

The Accuracy is : 9.609756e+01The Precision is : 1The Recall is : 4.666667e-01The f1Score is : 6.363636e-01

DM : 15 Confusion Matrix: 189 0 16 0

For Gesture : DECIDE

The Accuracy is : 9.219512e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 16 Confusion Matrix: 183 0 22 0

For Gesture : DECIDE

The Accuracy is : 8.926829e+01The Precision is : The Recall is : The f1Score is :

DM : 17 Confusion Matrix: 172 0 33 0 For Gesture : DECIDE

The Accuracy is: 8.390244e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 18 Confusion Matrix: 192 0 13 0

For Gesture : DECIDE

The Accuracy is: 9.365854e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 19 Confusion Matrix: 185 0 20 0

For Gesture : DECIDE

The Accuracy is: 9.024390e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 20 Confusion Matrix: 182 0 23 0

For Gesture : DECIDE

The Accuracy is: 8.878049e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 21 Confusion Matrix: 185 0 20 0

For Gesture : DECIDE

The Accuracy is : 9.024390e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0

DM : 22 Confusion Matrix: 187 0 18 0

For Gesture : DECIDE

The Accuracy is: 9.121951e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 23 Confusion Matrix: 186 0 19 0

For Gesture : DECIDE

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 24 Confusion Matrix: 195 0 10 0

For Gesture : DECIDE

The Accuracy is : 9.512195e+01The Precision is : The Recall is : The f1Score is : DM : 25 Confusion Matrix: 179 0 26 0

For Gesture : DECIDE

The Accuracy is : 8.731707e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 26 Confusion Matrix: 180 0 25 0

For Gesture : DECIDE

The Accuracy is: 8.780488e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 27 Confusion Matrix: 183 0 22 0

For Gesture : DECIDE

The Accuracy is: 8.926829e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 28 Confusion Matrix: 185 0 20 0

For Gesture : DECIDE

The Accuracy is : 9.024390e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 29 Confusion Matrix: 182 0 23 0

For Gesture : DECIDE

The Accuracy is : 8.878049e+01The Precision is : The Recall is : The f1Score is :

DM : 30 Confusion Matrix: 184 0 21 0

For Gesture : DECIDE

The Accuracy is: 8.975610e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 31 Confusion Matrix: 195 0 10 0

For Gesture : DECIDE

The Accuracy is: 9.512195e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 32 Confusion Matrix: 188 0 17 0 For Gesture : DECIDE

The Accuracy is: 9.170732e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 33 Confusion Matrix: 182 0 23 0

For Gesture : DECIDE

The Accuracy is: 8.878049e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 34 Confusion Matrix: 178 0 27 0

For Gesture : DECIDE

The Accuracy is : 8.682927e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 35 Confusion Matrix: 187 0 18 0

For Gesture : DECIDE

The Accuracy is : 9.121951e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 36 Confusion Matrix: 180 0 25 0

For Gesture : DECIDE

The Accuracy is : 8.780488e+01
The Precision is : 0
The Recall is : 0
The f1Score is : 0

DM : 37 Confusion Matrix: 178 0 27 0

For Gesture : DECIDE

The Accuracy is: 8.682927e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

GESTURE : FATHER

DM : 11 Confusion Matrix: 184 0 0 21

For Gesture : FATHER

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

DM : 12 Confusion Matrix: 185 0 0 20

For Gesture : FATHER

The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is: 1

For Gesture : FATHER DM : 28 Confusion Matrix: DM: 13 The Accuracy is: 8.878049e+01 Confusion Matrix: 195 0 0 10 The Precision is : 0 The Recall is : 0 192 0 13 0 The f1Score is: 0 For Gesture : FATHER For Gesture : FATHER DM:21 The Accuracy is : 9.365854e+01 The Accuracy is : 100 The Precision is : 1 The Recall is : 1 Confusion Matrix: 189 0 The Precision is : 0
The Recall is : 0 The f1Score is: 0 The f1Score is: 1 For Gesture : FATHER DM: 29 Confusion Matrix: 189 0 16 0 The Accuracy is : 9.219512e+01 The Precision is : 0 DM: 14 Confusion Matrix: 186 0 14 5 The Recall is : 0 The f1Score is : 0 For Gesture : FATHER For Gesture : FATHER The Accuracy is : 9.219512e+01 The Precision is : 0 DM · 22 The Accuracy is : 9.317073e+01 Confusion Matrix: The Precision is : 1
The Recall is : 2.631579e-01
The f1Score is : 4.166667e-01 188 0 The Recall is: 0 0 The f1Score is: 0 For Gesture : FATHER DM:30 DM: 15 The Accuracy is : 9.170732e+01 Confusion Matrix: Confusion Matrix: 183 0 22 0 The Precision is: 0 187 0 18 0 The Recall is : 0 The f1Score is : 0 For Gesture : FATHER For Gesture : FATHER DM : 23 Confusion Matrix: 185 0 The Accuracy is: 8.926829e+01 The Accuracy is: 9.121951e+01 The Precision is: 0 The Precision is : 0
The Recall is : 0 The Recall is: 0 The f1Score is: 0 20 0 The f1Score is: 0 For Gesture : FATHER DM:31 DM:16 The Accuracy is : 9.024390e+01 Confusion Matrix: Confusion Matrix: 183 0 22 0 The Precision is : 0 The Recall is : 0 186 0 19 0 The f1Score is: 0 For Gesture : FATHER For Gesture : FATHER DM:24 The Accuracy is : 9.073171e+01 The Accuracy is : 8.926829e+01 The Precision is : 0 Confusion Matrix: 189 1 15 0 The Precision is : 0
The Recall is : 0 The f1Score is : 0 The Recall is: 0 The f1Score is: 0 For Gesture : FATHER DM:32 Confusion Matrix: DM: 17 The Accuracy is: 9.219512e+01 Confusion Matrix: 185 0 20 0 The Precision is : 0 The Recall is: 0 The f1Score is : 0 For Gesture : FATHER For Gesture : FATHER The Accuracy is: 8.878049e+01 DM: 25 Confusion Matrix: 186 0 The Precision is : 0
The Recall is : 0 The Accuracy is : 9.024390e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 19 0 The f1Score is: 0 For Gesture : FATHER DM:33 DM : 18 Confusion Matrix: The Accuracy is : 9.073171e+01 Confusion Matrix: 185 0 20 0 The Precision is: 0 193 0 12 0 The Recall is : 0 The f1Score is : 0 For Gesture : FATHER For Gesture : FATHER DM:26 The Accuracy is : 9.024390e+01 Confusion Matrix: The Accuracy is: 9.414634e+01 The Precision is: 0 The Precision is : 0
The Recall is : 0 185 0 20 0 The Recall is : 0 The f1Score is : 0 The f1Score is : 0 For Gesture : FATHER DM:34 DM: 19 The Accuracy is : 9.024390e+01 Confusion Matrix: Confusion Matrix: 187 0 18 0 The Precision is : 0 The Recall is : 0 179 0 26 0 The f1Score is: 0 For Gesture : FATHER For Gesture : FATHER DM: 27 The Accuracy is: 8.731707e+01 Confusion Matrix: 181 1 23 0 The Accuracy is : 9.121951e+01 The Precision is : 0
The Recall is : 0 The Precision is : 0 The f1Score is : 0 The Recall is: 0 The f1Score is: 0

For Gesture : FATHER

The f1Score is : 0

DM : 20 Confusion Matrix: 182 0 23 0 The Accuracy is : 8.829268e+01The Precision is : 0The Recall is : 0 DM:35

Confusion Matrix: 189 0 16 0 For Gesture : FATHER The Accuracy is : 9.219512e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 DM:36 Confusion Matrix: 187 0 18 0 For Gesture : FATHER The Accuracy is: 9.121951e+01 The Precision is : 0 The Recall is : 0 The f1Score is: 0 DM:37 Confusion Matrix: 188 0 17 0 For Gesture : FATHER The Accuracy is : 9.170732e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0 GESTURE : FIND DM:11 Confusion Matrix: 186 0 0 19

For Gesture : FIND

The Accuracy is: 100 The Precision is: 1 The Recall is: 1

DM : 12 Confusion Matrix: 186 0 0 19

For Gesture : FIND

The Accuracy is: 100 The Precision is: 1 The Recall is : 1 The f1Score is : 1

DM:13 Confusion Matrix: 185 0 0 20

For Gesture : FIND

The Accuracy is: 100 The Precision is : 1 The Recall is : 1 The f1Score is: 1

DM: 14 Confusion Matrix: 182 0 19 4

For Gesture : FIND

The Accuracy is: 9.073171e+01 The Precision is:1 The Recall is:1.739130e-01 The f1Score is: 2.962963e-01

DM: 15 Confusion Matrix: 186 0 19 0

For Gesture : FIND

The Accuracy is : 9.073171e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0

DM:16 Confusion Matrix: 182 0

For Gesture : FIND The Accuracy is : 8.878049e+01 The Precision is : 0

The Recall is: 0 The f1Score is: 0

DM: 17 Confusion Matrix: 185 0 20 0

For Gesture : FIND

The Accuracy is : 9.024390e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0

DM:18 Confusion Matrix:

For Gesture : FIND

The Accuracy is: 8.829268e+01 The Precision is: 0 The Recall is: 0 The f1Score is: 0

DM: 19 Confusion Matrix: 188 0 17 0

For Gesture : FIND

The Accuracy is : 9.170732e+01 The Precision is : 0 The Recall is : 0 The f1Score is: 0

DM: 20 Confusion Matrix: 188 0

For Gesture : FIND

The Accuracy is : 9.170732e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0

DM : 21 Confusion Matrix: 186 0 19 0

For Gesture : FIND

The Accuracy is: 9.073171e+01 The Precision is : 0
The Recall is : 0 The f1Score is : 0

Confusion Matrix: 183 0 22 0

For Gesture : FIND

The Accuracy is: 8.926829e+01 The Precision is : 0 The Recall is: 0 The f1Score is: 0

DM: 23 Confusion Matrix: 186 0 19 0 For Gesture : FIND

The Accuracy is : 9.073171e+01 The Precision is : 0 The Recall is : 0 The f1Score is: 0

DM:24 Confusion Matrix: 179 0 26 0

For Gesture : FIND

The Accuracy is: 8.731707e+01
The Precision is: 0 The Recall is : 0 The f1Score is : 0

DM · 25 Confusion Matrix: 184 0 21 0

For Gesture : FIND

The Accuracy is: 8.975610e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0

DM:26 Confusion Matrix: 182 0 23 0

For Gesture: FIND

The Accuracy is: 8.878049e+01 The Precision is : 0 The Recall is : 0 The f1Score is: 0

DM: 27 Confusion Matrix: 185 0 20 0

For Gesture : FIND

The Accuracy is: 9.024390e+01 The Precision is : 0 The Recall is: 0 The f1Score is: 0

DM:28 Confusion Matrix: 184 0 21 0

For Gesture : FIND

The Accuracy is: 8.975610e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0

DM:29 Confusion Matrix: 189 0

For Gesture : FIND

The Accuracy is : 9.219512e+01 The Precision is : 0 The Recall is : 0 The f1Score is: 0

DM:30 Confusion Matrix: 187 0 18 0

For Gesture : FIND

The Accuracy is : 9.121951e+01 The Precision is : 0 The Recall is: 0 The f1Score is: 0

DM : 31 Confusion Matrix: For Gesture : HEARING DM: 19 Confusion Matrix: 184 0 21 0 193 0 12 0 The Accuracy is: 100 The Precision is: 1 The Recall is: 1 The f1Score is : 1 For Gesture : FIND For Gesture : HEARING The Accuracy is: 9.414634e+01 The Precision is : 0
The Recall is : 0 The Accuracy is : 8.975610e+01 The Precision is : 0 DM: 12 Confusion Matrix: The f1Score is: 0 191 0 The Recall is: 0 The f1Score is: 0 DM: 32 For Gesture : HEARING Confusion Matrix: DM:20 187 0 18 0 The Accuracy is: 100 Confusion Matrix: The Precision is : 1 The Recall is : 1 187 0 18 0 The f1Score is: 1 For Gesture : FIND For Gesture : HEARING The Accuracy is : 9.121951e+01 The Precision is : 0 DM: 13 The Accuracy is : 9.121951e+01 Confusion Matrix: 187 0 0 18 The Recall is: 0 The Precision is: 0 The Recall is : 0 The f1Score is : 0 The f1Score is: 0 DM:33 For Gesture : HEARING Confusion Matrix: DM:21 Confusion Matrix: 186 0 19 0 The Accuracy is: 100 The Precision is : 1 The Recall is : 1 The f1Score is: 1 For Gesture : FIND For Gesture : HEARING The Accuracy is : 9.073171e+01 DM: 14 The Accuracy is: 9.121951e+01 The Precision is: 0 Confusion Matrix: 183 0 18 4 The Recall is : 0 The Precision is: 0 The f1Score is: 0 The Recall is: 0 The f1Score is: 0 DM:34 For Gesture : HEARING Confusion Matrix: DM:22 The Accuracy is : 9.121951e+01 The Precision is : 1 The Recall is : 1.818182e-01 Confusion Matrix: 180 0 25 0 191 0 14 0 The f1Score is: 3.076923e-01 For Gesture : FIND For Gesture : HEARING The Accuracy is : 9.317073e+01 The Precision is : 0
The Recall is : 0 DM : 15 Confusion Matrix: 183 0 The Accuracy is : 8.780488e+01 The Precision is : 0 The f1Score is : 0 The Recall is: 0 The f1Score is: 0 DM:35 For Gesture : HEARING Confusion Matrix: 195 0 10 0 DM: 23 Confusion Matrix: 192 0 13 0 The Accuracy is : 8.926829e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 For Gesture : FIND For Gesture : HEARING The Accuracy is : 9.512195e+01 The Precision is : 0
The Recall is : 0 DM:16 The Accuracy is: 9.365854e+01 Confusion Matrix: 191 0 14 0 The Precision is: 0 The f1Score is: 0 The Recall is : 0 The f1Score is : 0 For Gesture : HEARING DM:36 Confusion Matrix: 187 0 18 0 DM : 24 Confusion Matrix: The Accuracy is: 9.317073e+01 The Precision is : 0 The Recall is : 0 185 0 20 0 The f1Score is: 0 For Gesture : FIND For Gesture : HEARING The Accuracy is : 9.121951e+01 DM: 17 The Accuracy is: 9.024390e+01 The Precision is: 0 The Recall is : 0 The f1Score is : 0 Confusion Matrix: The Precision is : 0
The Recall is : 0 The f1Score is : 0 DM:37 For Gesture : HEARING Confusion Matrix: DM: 25 188 0 17 0 The Accuracy is: 9.268293e+01 The Precision is: 0 Confusion Matrix: 181 0 24 0 The Recall is: 0 The f1Score is : 0 For Gesture : FIND For Gesture : HEARING The Accuracy is : 9.170732e+01 The Precision is : 0
The Recall is : 0 DM: 18 The Accuracy is: 8.829268e+01 Confusion Matrix: The Precision is : 0 The f1Score is: 0 193 0 The Recall is: 0 12 0 The f1Score is: 0

For Gesture : HEARING

The Precision is: 0

The Recall is : 0 The f1Score is : 0

The Accuracy is : 9.414634e+01

DM:26

184 0 21 0

Confusion Matrix:

GESTURE: HEARING

Confusion Matrix:

184 0 0 21 For Gesture : HEARING

The Accuracy is : 8.975610e+01 The Precision is : 0 The Recall is : 0 The f1Score is : 0

DM : 27 Confusion Matrix: 187 0 18 0

For Gesture : HEARING

The Accuracy is: 9.121951e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 28 Confusion Matrix: 188 0 17 0

For Gesture : HEARING

The Accuracy is : 9.170732e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 29 Confusion Matrix: 190 0 15 0

For Gesture : HEARING

The Accuracy is: 9.268293e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 30 Confusion Matrix: 180 0 25 0

For Gesture : HEARING

The Accuracy is: 8.780488e+01 The Precision is: 0 The Recall is: 0 The f1Score is: 0

DM : 31 Confusion Matrix: 186 0 19 0

For Gesture : HEARING

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 32 Confusion Matrix: 189 0 16 0

For Gesture : HEARING

The Accuracy is: 9.219512e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 33 Confusion Matrix: 184 0 21 0

For Gesture : HEARING

The Accuracy is : 8.975610e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM:34

Confusion Matrix: 184 0 21 0

For Gesture : HEARING

The Accuracy is: 8.975610e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 35 Confusion Matrix: 191 0 14 0

For Gesture : HEARING

The Accuracy is: 9.317073e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

DM : 36 Confusion Matrix: 193 0 12 0

For Gesture : HEARING

The Accuracy is : 9.414634e+01The Precision is : 0The Recall is : 0The f1Score is : 0

DM : 37 Confusion Matrix: 186 0 19 0

For Gesture : HEARING

The Accuracy is: 9.073171e+01
The Precision is: 0
The Recall is: 0
The f1Score is: 0

## **Neural Network:**

>> Neural\_Network

For Gesture : ABOUT

The Accuracy is: 9.992532e+01 The Precision is: 9.936842e+01

The Recall is: 100

The f1 Score is: 9.968321e+01

For Gesture: AND

The Accuracy is: 9.997511e+01

The Precision is: 100

The Recall is: 9.975248e+01 The f1 Score is: 9.987608e+01

For Gesture: CAN

The Accuracy is: 9.997511e+01

The Precision is: 100

The Recall is: 9.975124e+01 The f1 Score is: 9.987547e+01

For Gesture: COP

The Accuracy is: 100 The Precision is: 100 The Recall is: 100 The f1 Score is: 100

For Gesture: GOOUT
The Accuracy is: 100
The Precision is: 100
The Recall is: 100
The f1 Score is: 100

For Gesture: DEAF
The Accuracy is: 100
The Precision is: 100
The Recall is: 100
The f1 Score is: 100

For Gesture : DECIDE

The Accuracy is: 9.997511e+01

The Precision is: 100

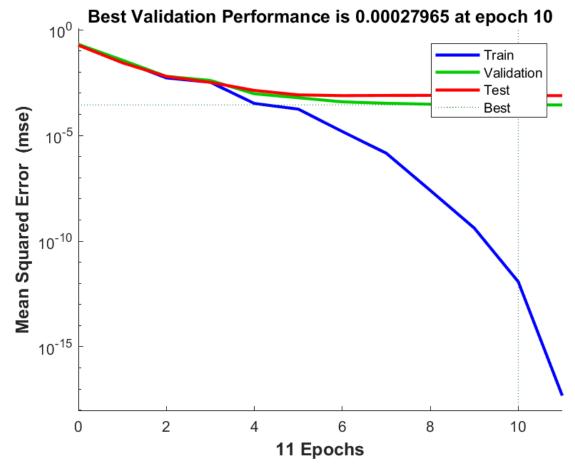
The Recall is: 9.973822e+01 The f1 Score is: 9.986894e+01

For Gesture : FATHER
The Accuracy is : 100
The Precision is : 100
The Recall is : 100
The f1 Score is : 100

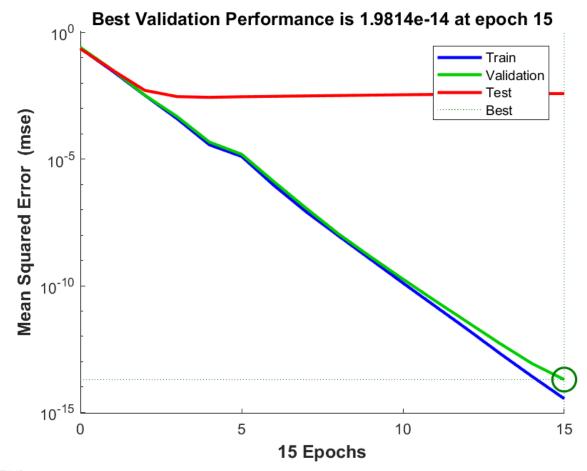
For Gesture: FIND
The Accuracy is: 100
The Precision is: 100
The Recall is: 100
The f1 Score is: 100

For Gesture : HEARING The Accuracy is : 100 The Precision is : 100 The Recall is : 100 The f1 Score is : 100

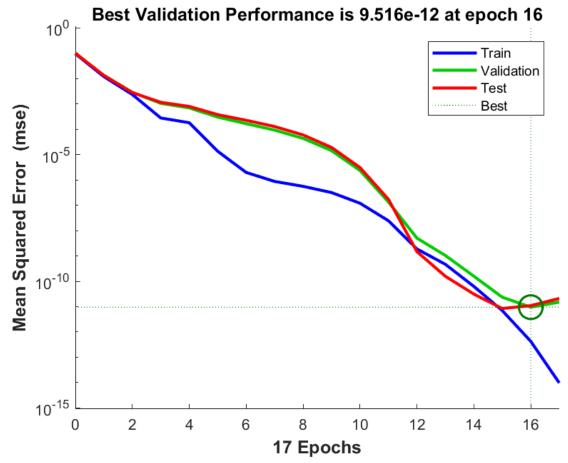
ABOUT:



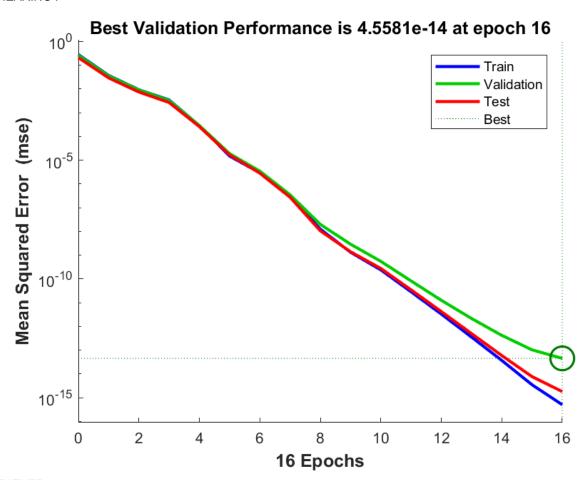
CAN:



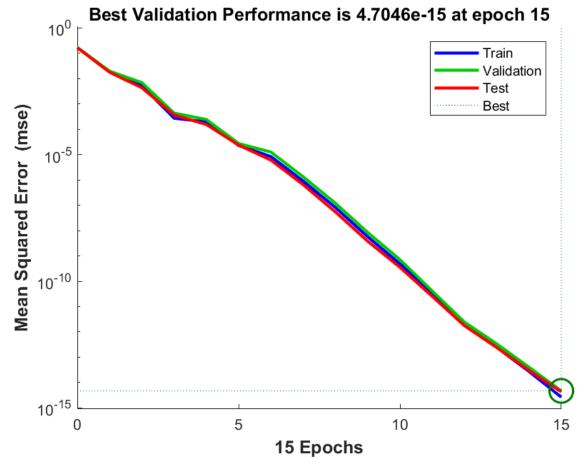
FIND:



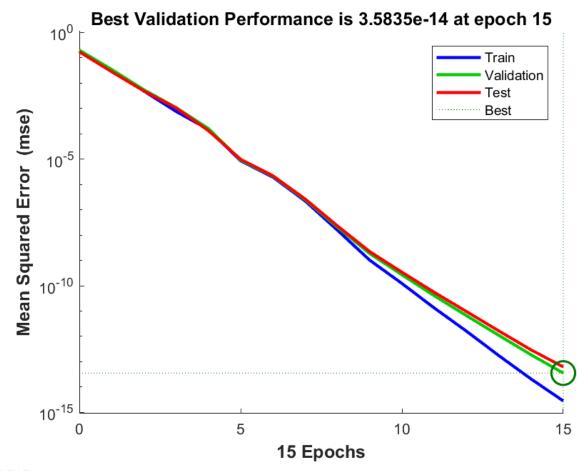
**HEARING:** 



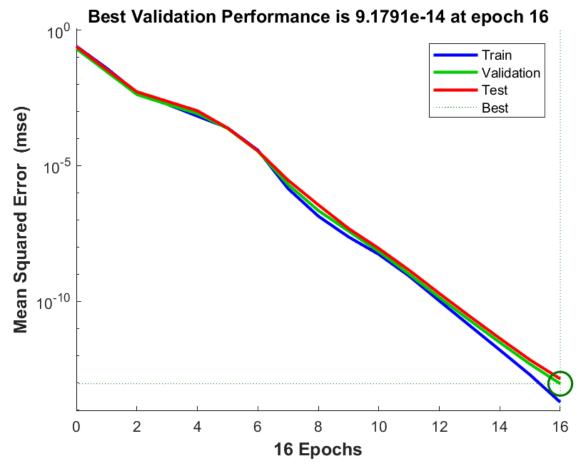
FATHER:



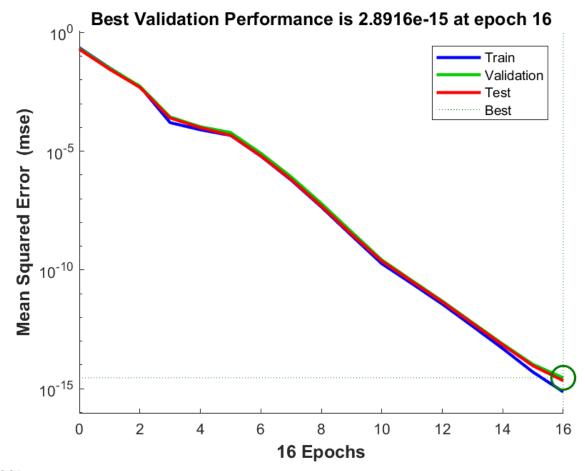
DECIDE:



DEAF:



GOOUT:



COP:

