Work Which we are going to do this semester :

1. Improve the usability and interface of app.
2. Improve the accuracy.
3. Pressure data which we are not getting for each phone in the previous sem. We will try now to get that data from any phone.
4. Create new feature set including the previous set after removal of redundant feature.
5. Right now app is working only for single gesture authentication. So , this semester we want to implement for the multiple gesture if it is efficient keeping in mind of limited time.
6. Try the new Machine learning algorithm like neural network.
7. Previous we are doing testing and training of user on multiple user data. This semester we want to do training and testing using the same user data.

Week 4:
As we discussed in the previous meeting regarding different aspects of feature selection for single finger multi pattern gesture authentication. Some new features we are considering right now are the following :

1. Starting point : As we have discussed the starting point most probably will be different. So we are considering a normalized value for that.
For normalized value we thinking of mean value or any different which would be relatively close to all values as compare to mean.

2.Ending point : As we have discussed the Ending point most probably will be different. So we are considering a normalized value for that.
For normalized value we thinking of mean value or any different which would be relatively close to all values as compare to mean.

3.Orientation : It has huge impact on accuracy of gesture Authentication as the drawing of gesture depends on how you are holding your phone while drawing the pattern like you are standing, or sitting or else.

Week 5: Data Collection.

Week 8:(Modeling Free-Form Handwriting Gesture User Authentication for Android Smartphones)
New feature : related to pixel
Depending on the length of gesture divide into three part
Now we have sum of all the pixel over whole length and particular segment.
Now make seg total pixel/total pixel for three segment.

TOTPIXEL Total Number of Pixels= Σ all pixels
TRIFOLD1 Fold 1 = Σ of all pixels in 1st fold / TOTPIXEL
TRIFOLD2 Fold 2 = Σ of all pixels in 2nd fold / TOTPIXEL
TRIFOLD3 Fold 3 = Σ of all pixels in 3rd fold / TOTPIXEL

Size covered by the fingertip in the screen (Mean, Max, Min Android)
PR =Pressure exerted to the device(Mean, Max, Min Android)
CT Completion Time (FDTIME + FUTIME)
 FUTIME = Total Finger Up Time (Σ finger up time)
 FDTIME= Total Finger Down Time (Σ finger down time)
/* TOT_F_UP Total number of Finger ups Σ finger up/s*/
 SPEED Total speed in creating the pattern (TOTPIXEL / CT)