

SEP786: Artificial Intelligence

The Data Used:

- So, Basically the Data the I used was about the mobile devices and all other important aspects that are investigated in today's Market.
- This Data Contained Various Materials of Content that had Wi-Fi, Price, Bluetooth, Functionality, 3G, 4G etc in It.

The Experiments:

- In this project, the primary task was to perform **PCA and Feature selection approaches** to a large-scale data, classification or regression problem. In doing so, we had to choose a single data set which we can classify with each approach.
- Further, we should choose two different classification or regression approaches. So, in all, we conducted 4 experiments – PCA features with classification / regression approaches one and two, and raw features selected via search with classification approaches one and two.
- Once dataset was finalized, all we did was comparing the results from the classifiers or regressors that we chose. The comparison (in general – details will follow below) must include the following analyses:
 - A confusion matrix (classifier)
 - Mean Square Error (regressor)

Observations of Results:

- The Results observed were Good Enough with maximum accuracy and minimum error rate.
- The PCA and BS Dataset showed the Mean square error to be the least and the regressor and comparison model were accurate.
- The Observations were recorded in a new .xls file and The Computational time was also noted down.
- At first some issues did arise when we had to go through the regression part of feature selection where the dataset was divided into multiple classes which needed to be changed and the observations to be done with careful analysis.
- The output showed how well PCA and Feature selection technique works in understanding a model that has a wide dataset.