

## Read Me

Question 1: Support Vector Machine using SMO ALgorithm

### **ICM2015502\_Question\_SVM**

Data Set:

1. MNIST Data set

The Assignment is on Jupyter Notebook

FileName for Face recognition using PCA:

### **ICM2015502\_Question\_SVM**

Open the file which ( is public ) add this to Notebook, Data set

Name: "mnist\_train.csv" "mnist\_test.csv" and run the code, for question SVM using SMO algorithm

This will predict the accuracy of our model for face recognition using PCA, LDA

1. import numpy as np # linear algebra
2. import pandas as pd # data processing, CSV file I/O (e.g. pd.read\_csv)
3. from sklearn.model\_selection import train\_test\_split as tts
4. from sklearn.metrics import confusion\_matrix
5. import seaborn as sns
6. import matplotlib.pyplot as plt
7. import os
8. import random as rnd

We have implemented using

1. Linear Kernel Type
  - a. Accuracy: 95.46%
2. Gaussian Kernel Type
  - a. Accuracy: 95.08%
3. Quadratic Kernel Type
  - a. Accuracy: 46.97%