

# CSE/ECE 343/543: Machine Learning

## Assignment-3B

Q1.

Train (for 10000 epochs):

Acc= 98.438

Error = 0.0425

Validation :

Acc= 92.56

Error = 0.0525

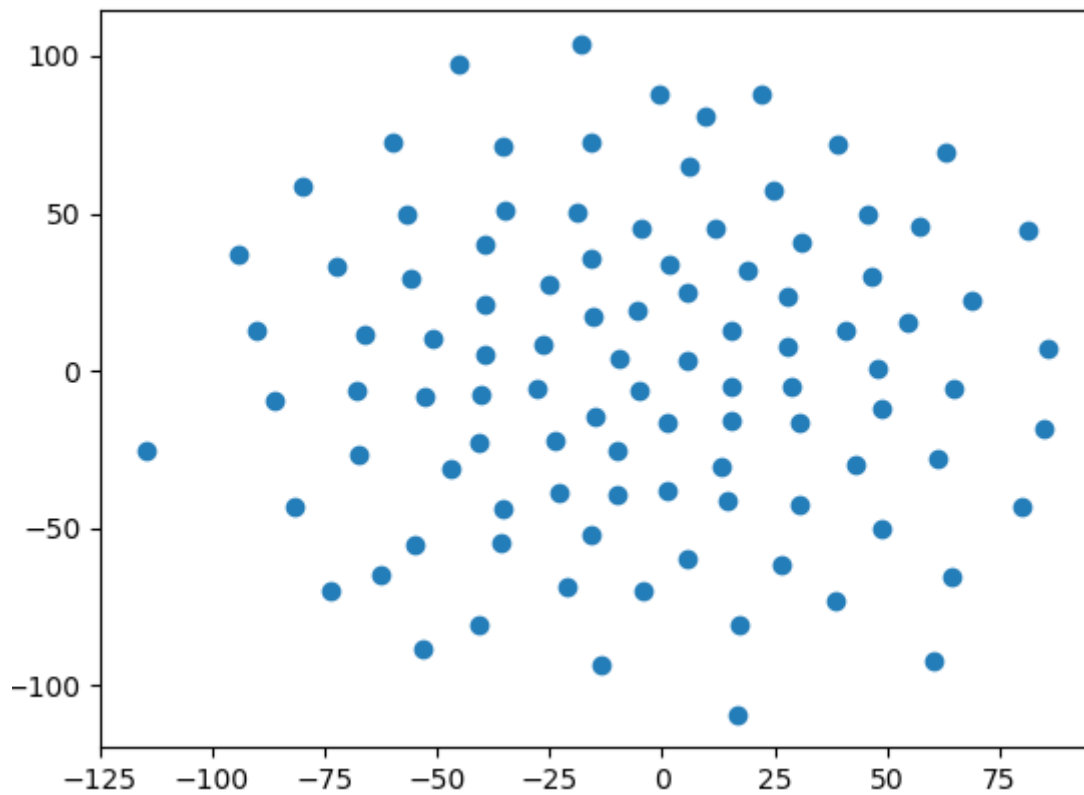
Test:

Acc= 93.25

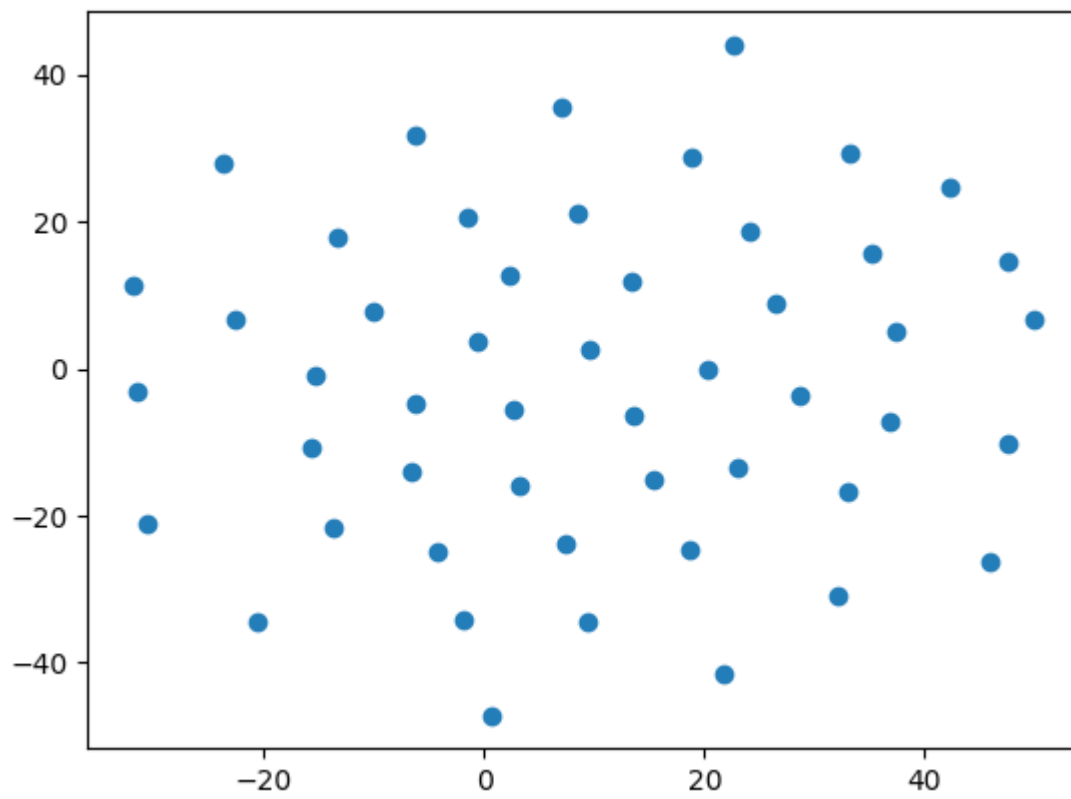
**Error = 0.0501**

c) Weights plots

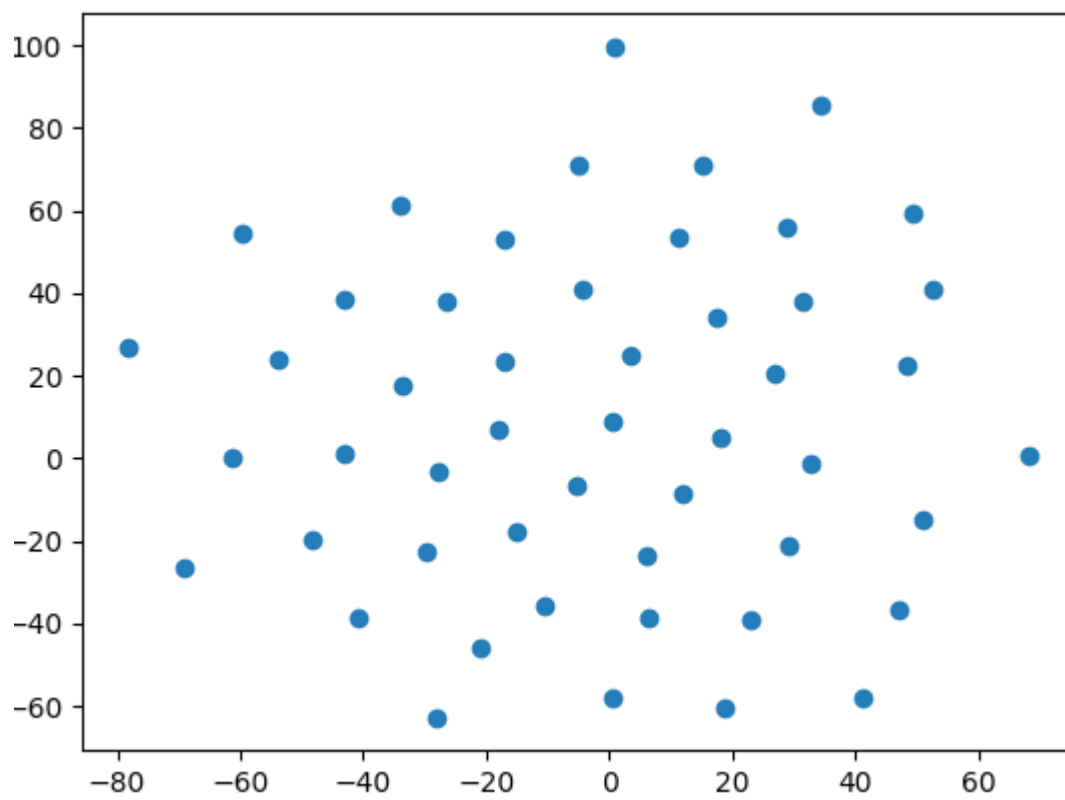
W1:



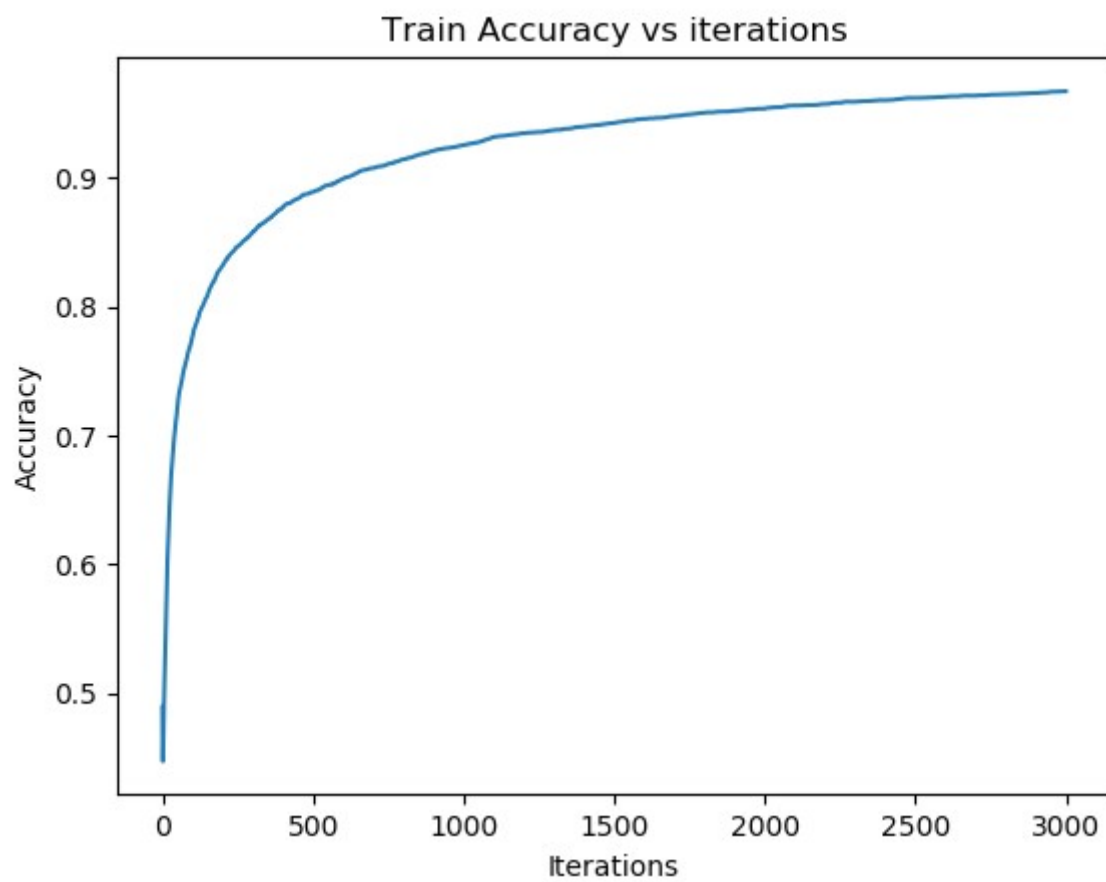
**w2:**

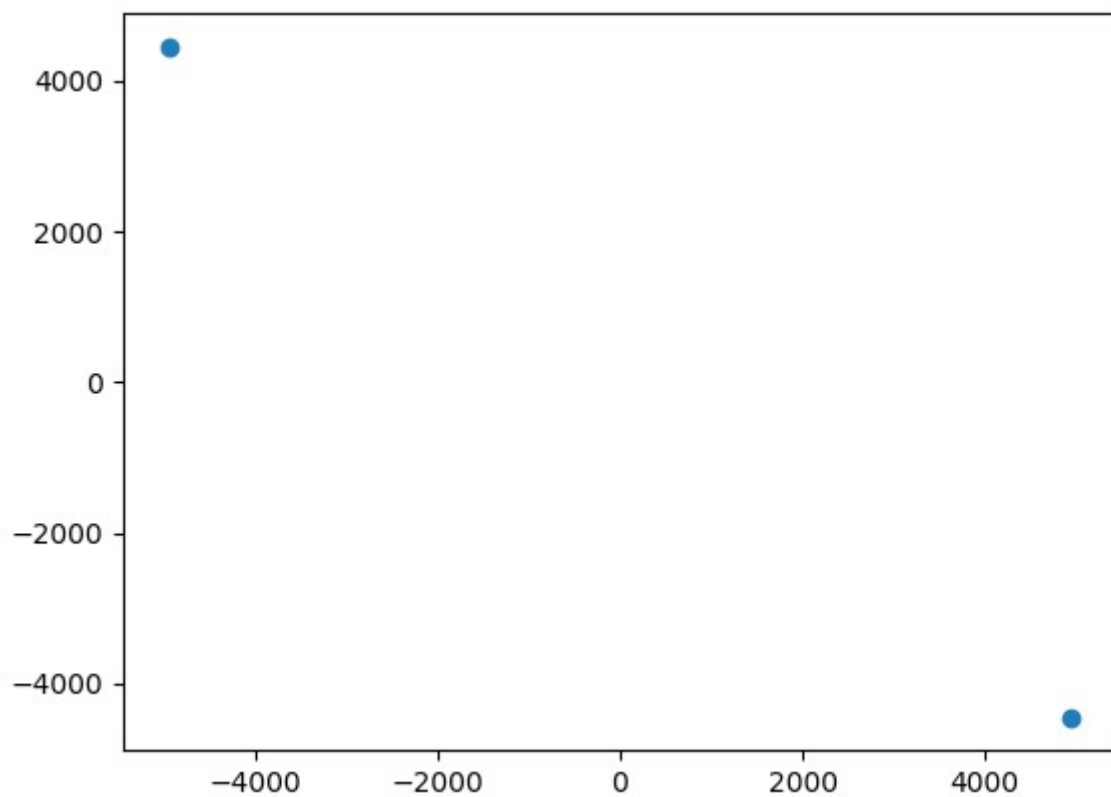


**w3:**

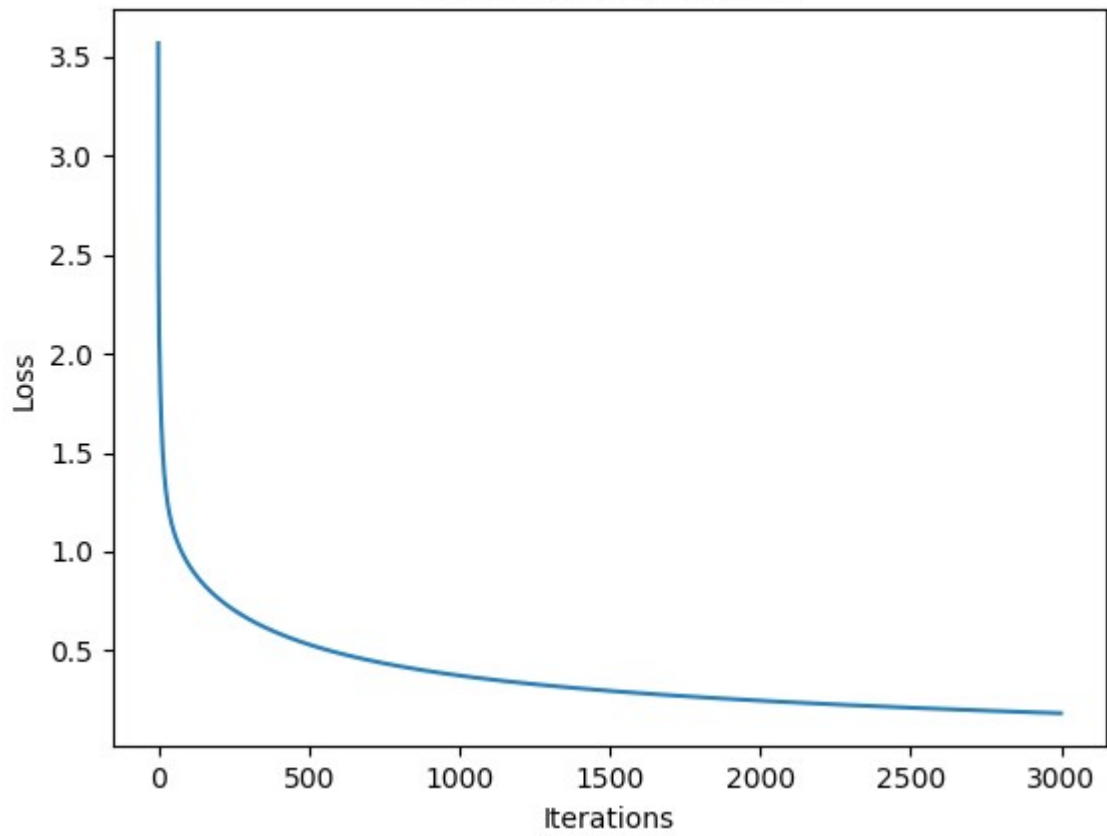


## Accuracy plot:

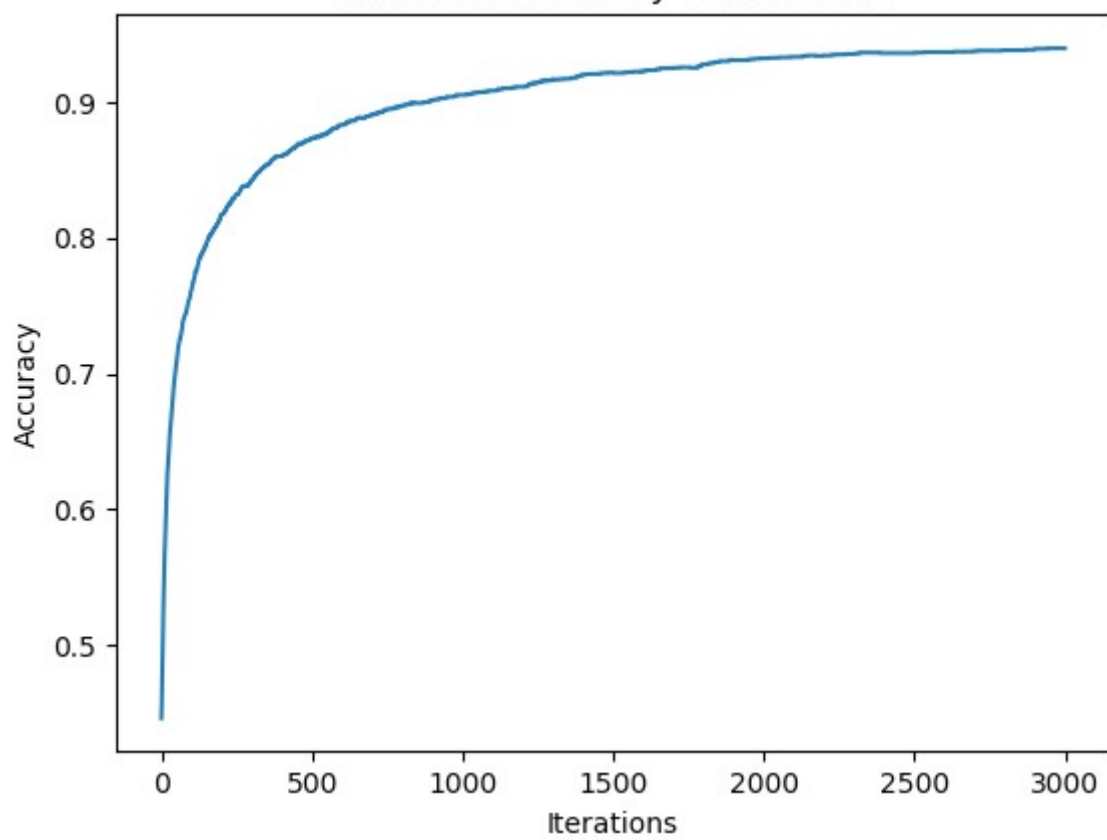


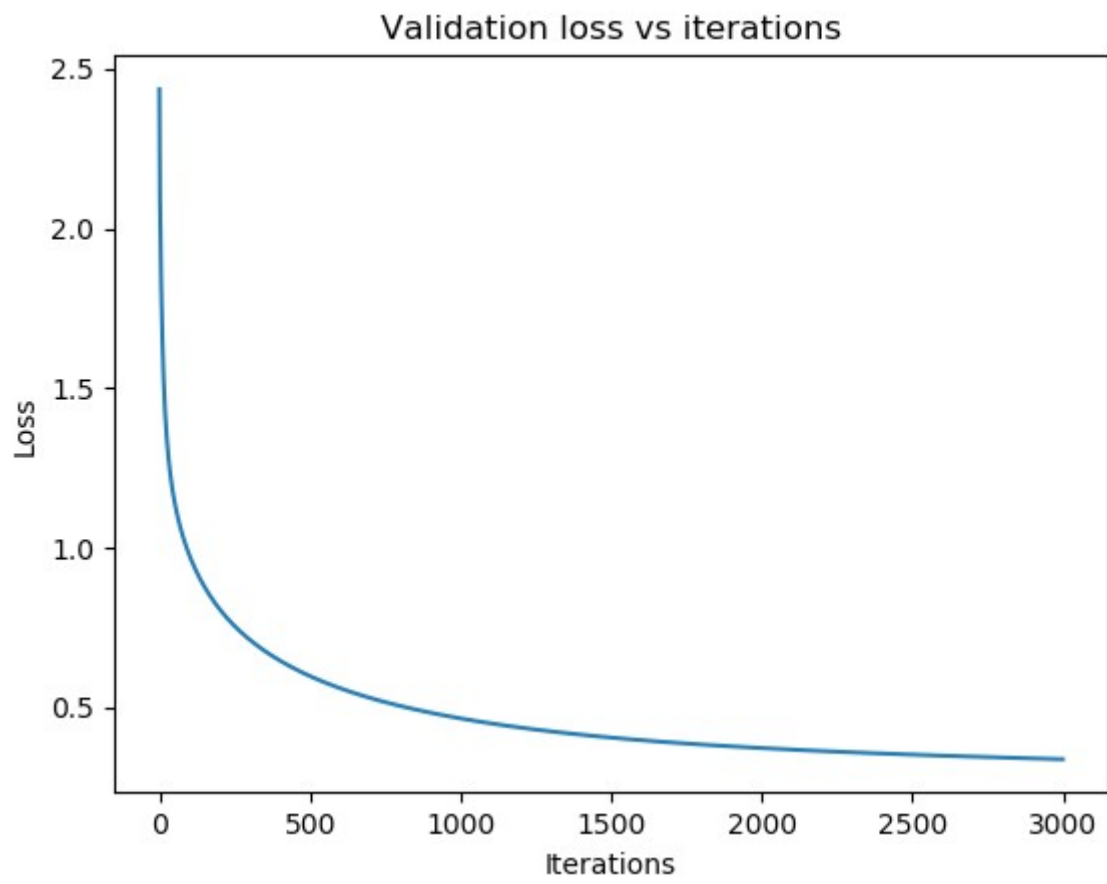


Train loss vs iterations



Validation Accuracy vs iterations





**Q2:**

**Test Accuracy:** 0.8145

**Confusion Matrix :**  $\begin{bmatrix} 798 & 123 \\ 248 & 831 \end{bmatrix}$

**Roc curve:**

