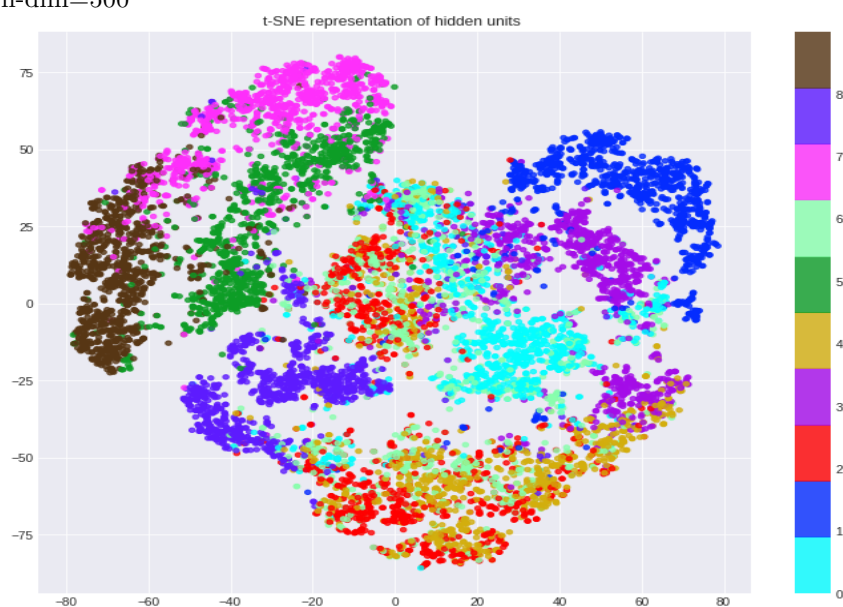# DL Assiginment-4

CE15B035 Aniket More, EE15B082 Sai Ram Chittala

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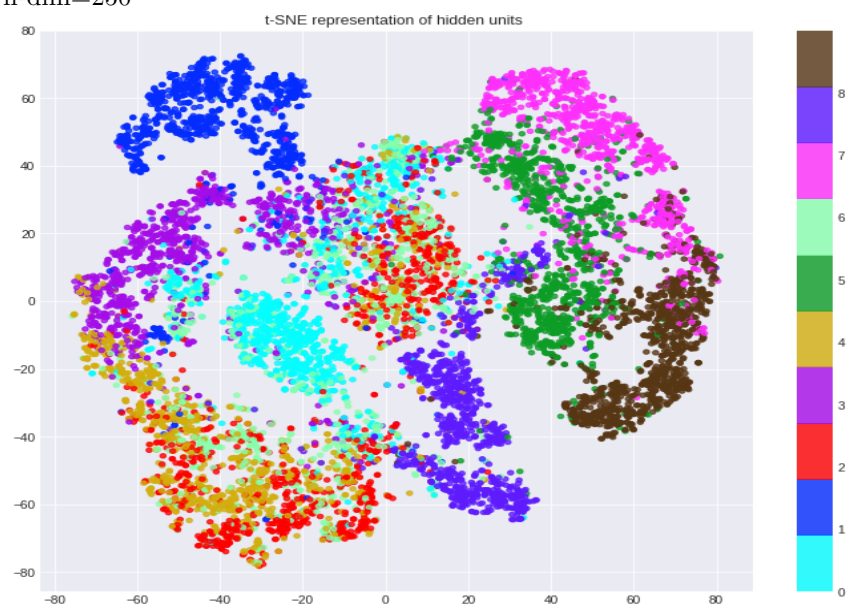
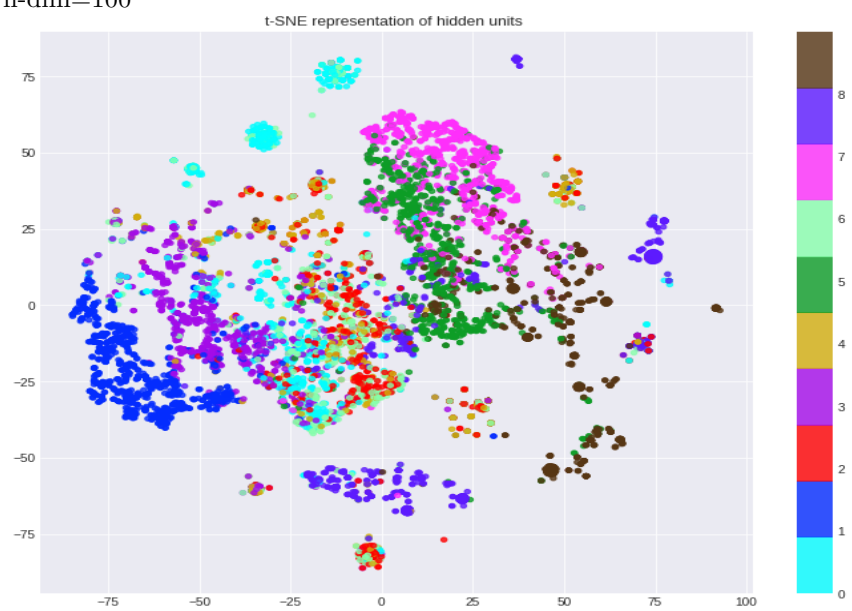## 1 t-SNE plots of learned representations

- h-dim=500

We can see that the classes are well separated in the 2d tSNE representation. Class
es 2,4 are clustered together and classes 5,7,9 are also relatively closer to each other.
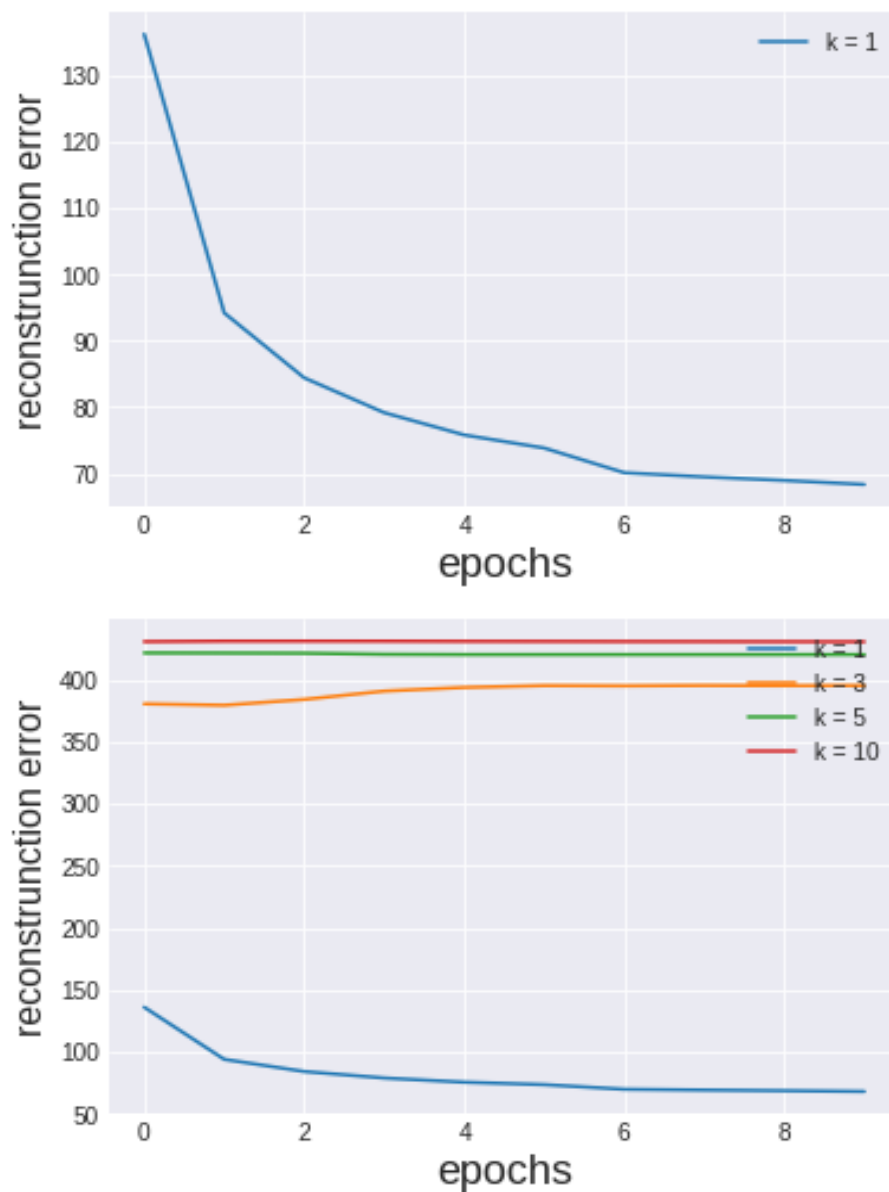
- h-dim=250

t-SNE representation of hidden units

- h-dim=100


t-SNE representation of hidden units

As the latent variable space dimension is increased, the classes get separated well.

2 Effect of different k values

We were not able to train the network for values of k not equal to 1. This maybe because the initial distribution is random and we draw from this random distribution multiple times. This will make it harder to train in the beginning as the parameters are wrong. This makes the hyoerparameter tuning difficult.

3 Plot of the samples generated by Gibbs chain
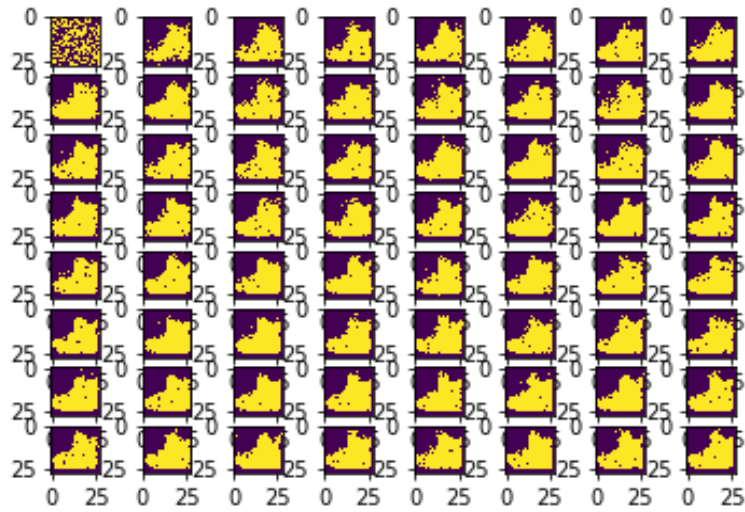
We can see that initially the samples are noisy but as training progresses they get better