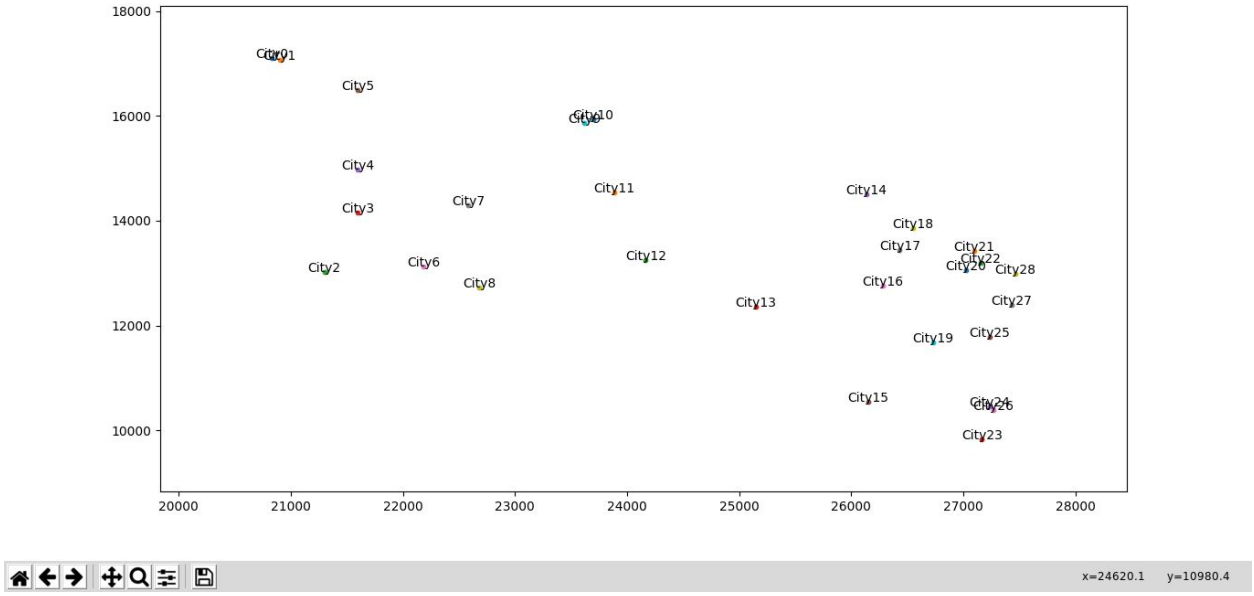
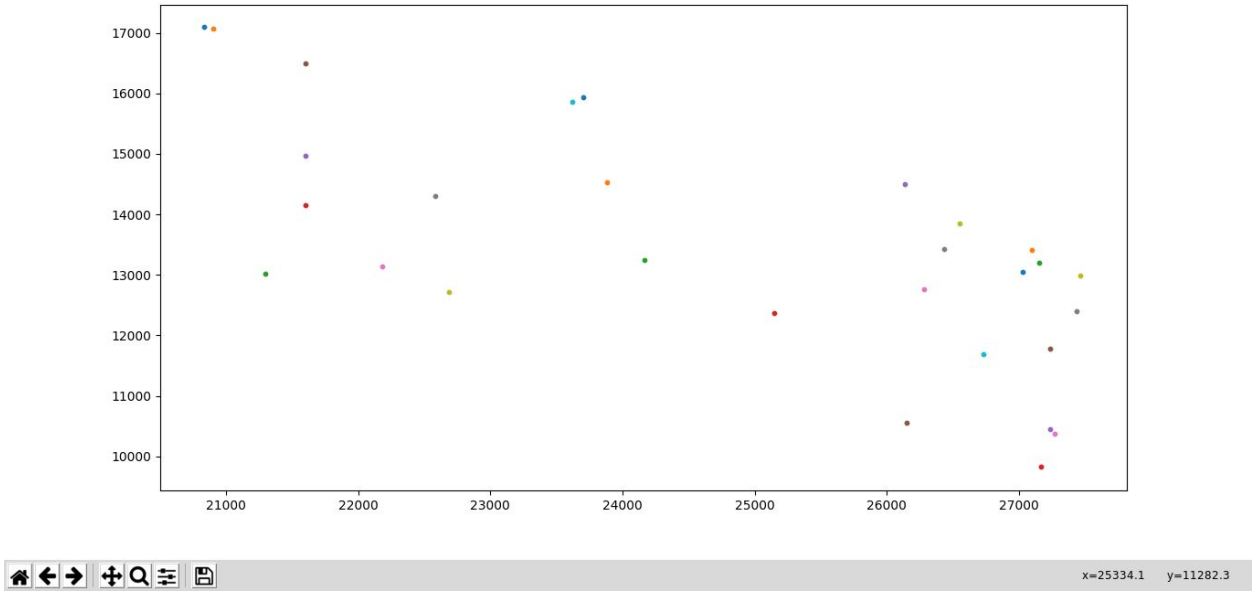
1.) Below are the plots with and without the city names of the data-set





2.)

a.) The Network size is 1 x 150 , with a total of 150 neurons

b.) initial:150 (Takes everyone as neighbours),

$\Delta\sigma = e^{(\frac{i_{t+1}}{2000})} - e^{(\frac{i_t}{2000})}$, where i_{t+1} : iteration number at time t+1

i_t : iteration number at time t

c.) initial:1 ,

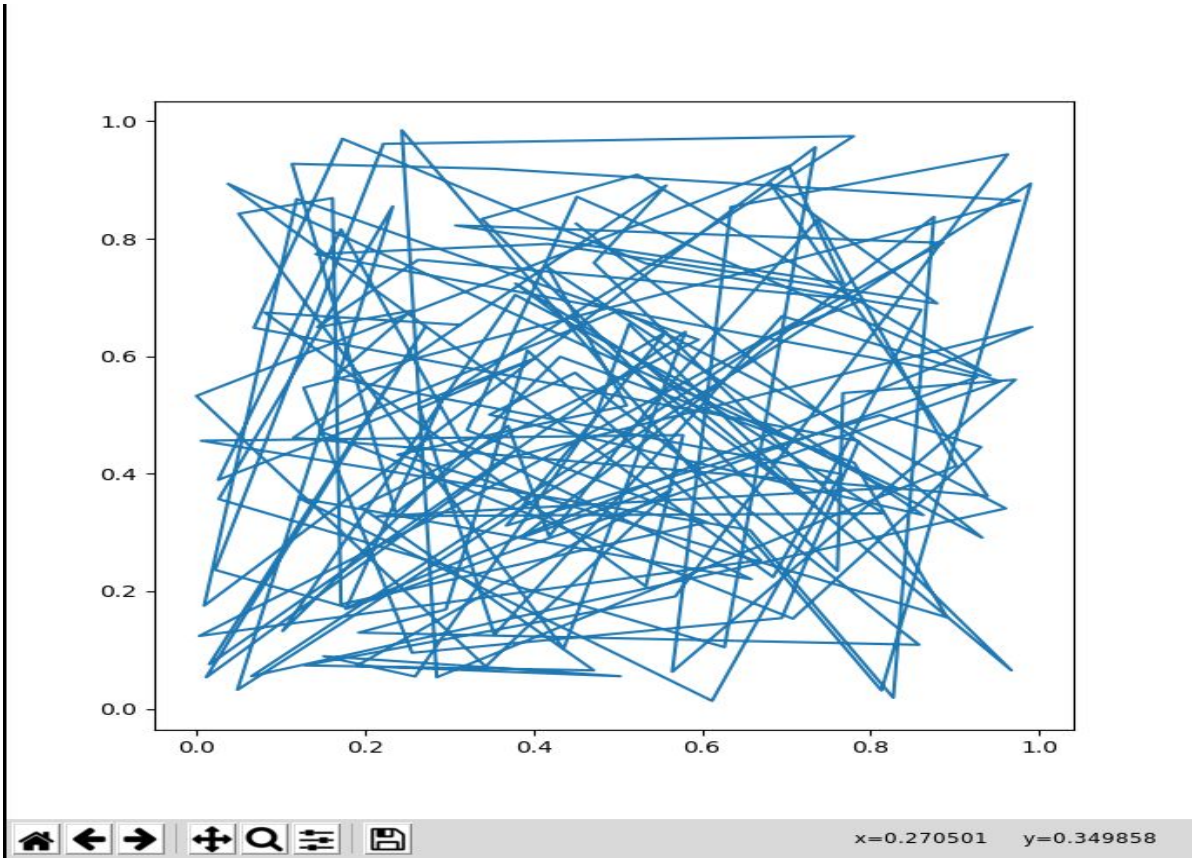
$\Delta\eta = e^{(\frac{i_{t+1}}{2000})} - e^{(\frac{i_t}{2000})}$,where i_{t+1} : iteration number at time t+1

i_t : iteration number at time t

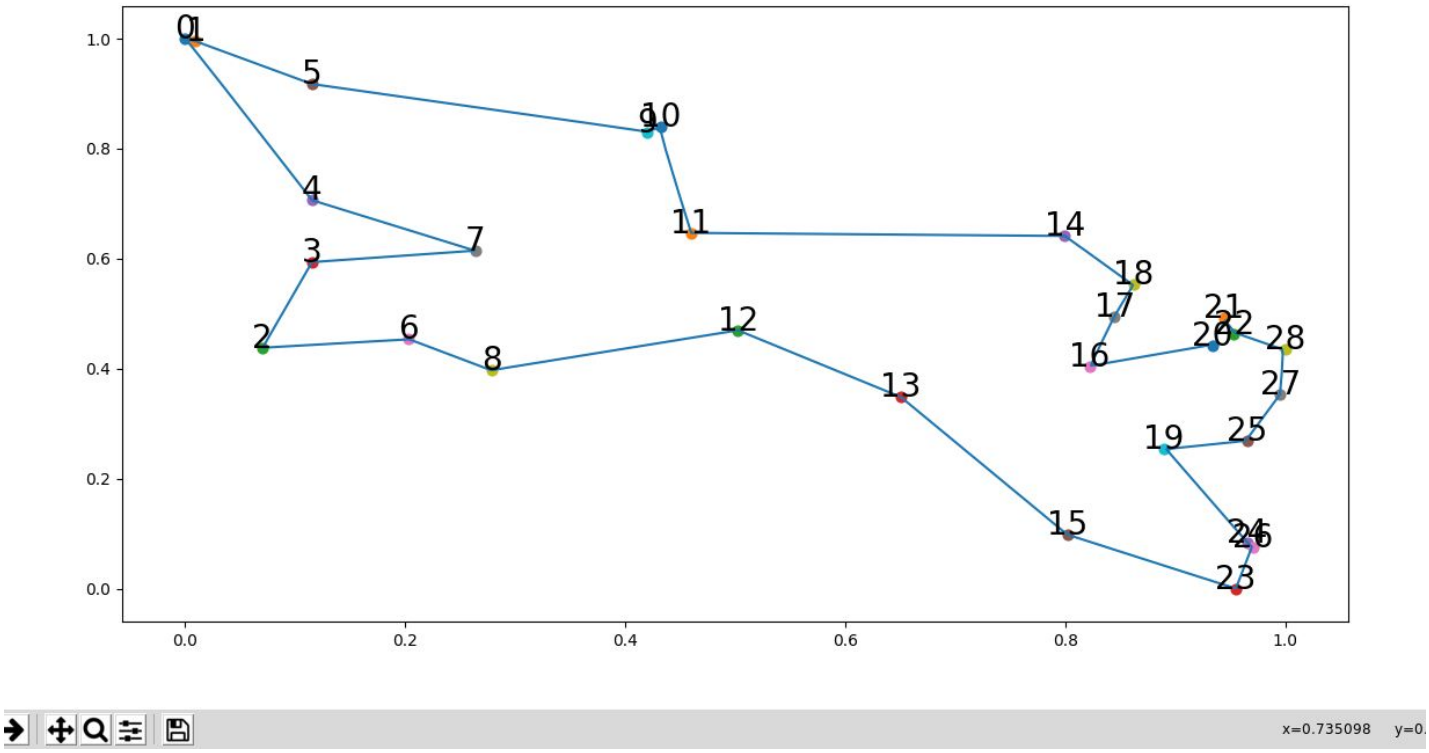
d.)The path we need to follow is :

1->0->4->7->3->2->6->8->12->13->15->23->26->24->19->25->27->28->22
->21->20->16->17->18->14->11->10->9->5->1

3.)



Before



After

(Note : If the above graph is not obtained , please run the code once again)

4.) Tuning the hyperparameters took the most amount of time while writing the

Code. Especially σ_o , which is essential for the the calculation of the neighbours, the code was very sensitive to its values, increasing it would lead to very smooth and underfitting curve , while decreasing it lead to sharp turns, i.e. even very far neighbours we influenced considerably. It's effect are direct consequences of the formula.