ECI289I Homework 2
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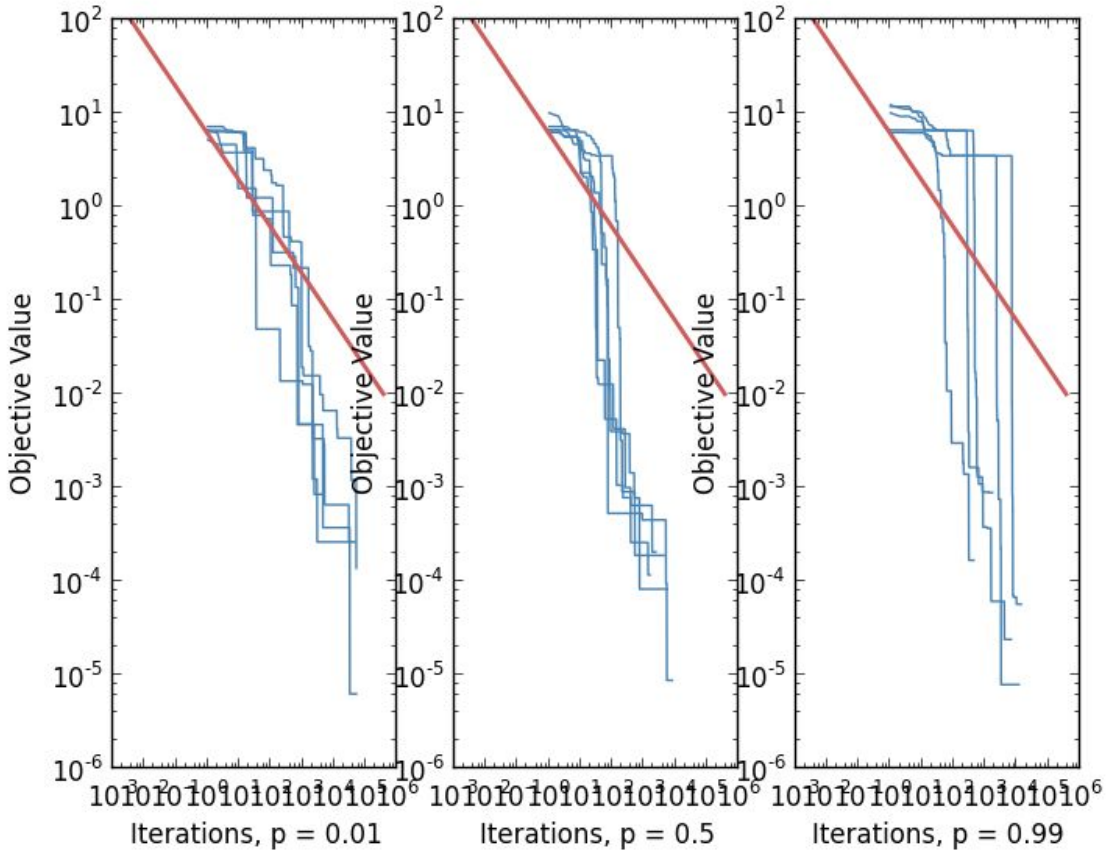
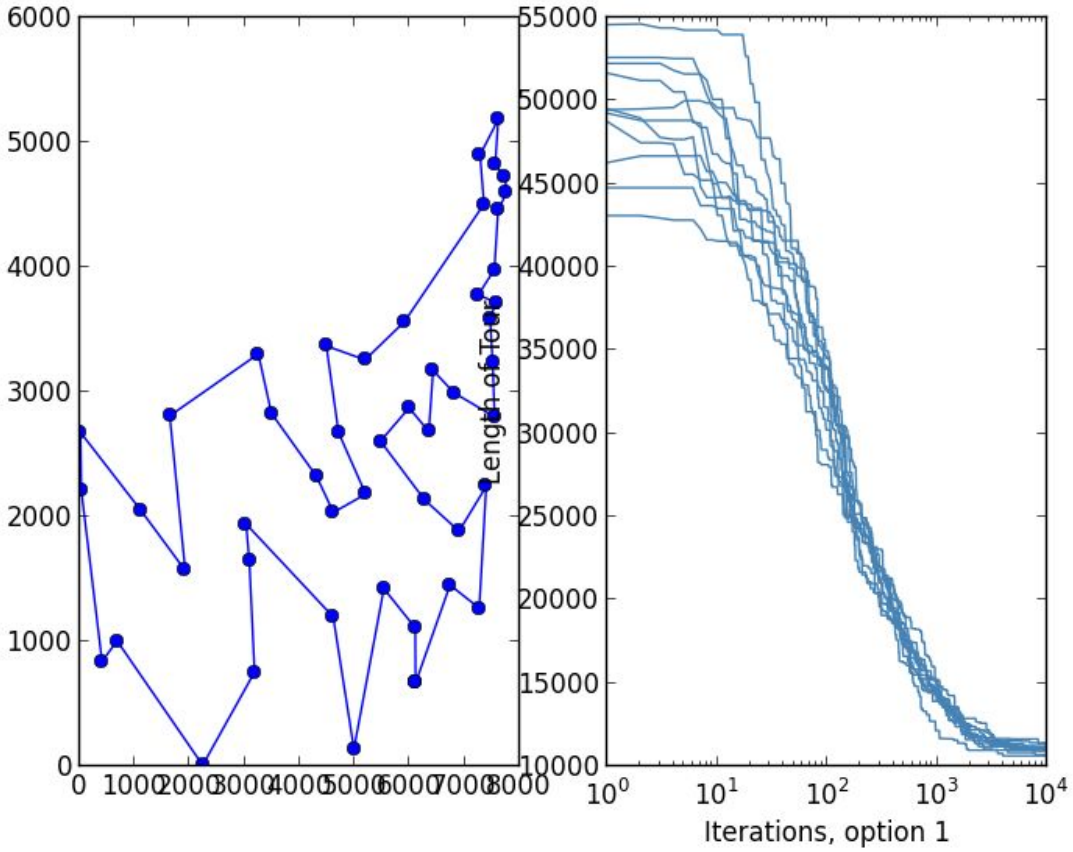
1.



(a)
P being too big makes the iteration time unstable. Some seeds yield faster convergence while others need more time to converge since some of them get stuck in local minimum. P being too small makes it a random search which takes longer time.

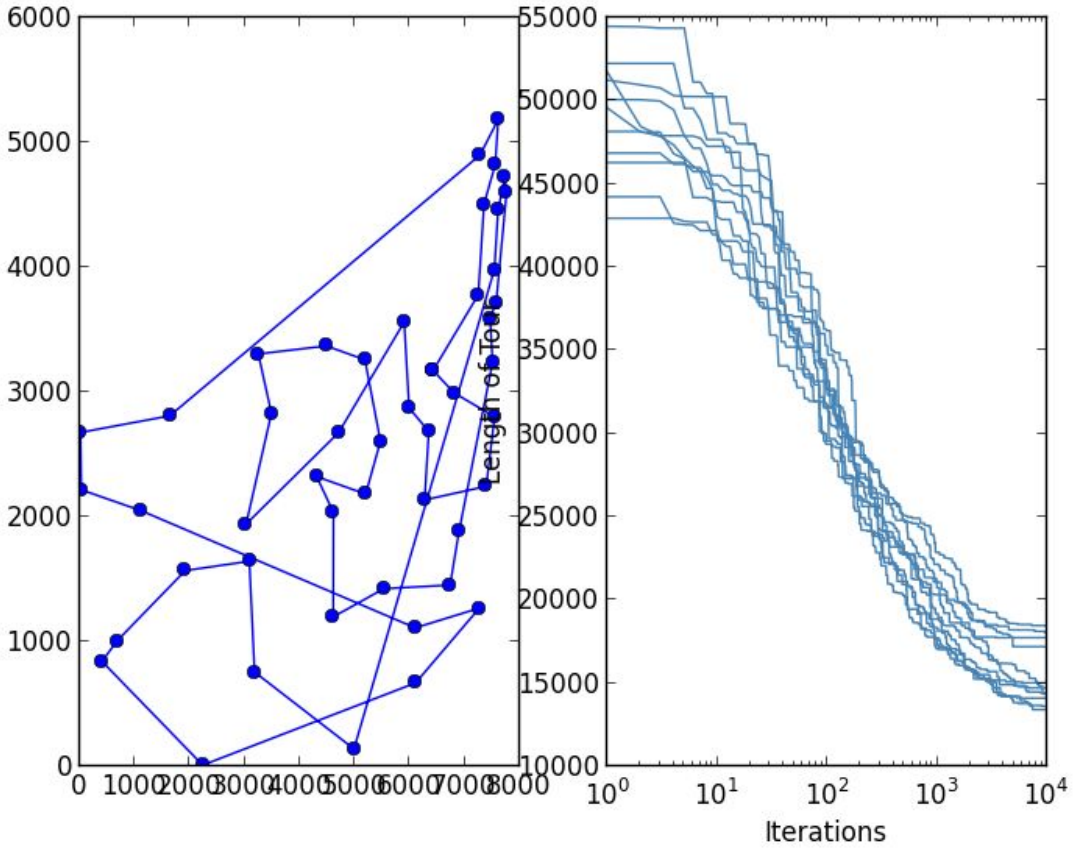
(b)
Enumeration is slower than hill climbing, which can be seen from the steeper slope of hill climbing.

2.
(a)



Distances at iteration 10,000 of all seeds are below 15,000. The average result is around 11,000 with optimal value at around 10,637. While using option 1 gives results around 15,000, with optimal value at 12,929. Also, the routing map on the left seems optimal.

(b)



Best result is 13,410, with a variety of distances up to 18,463. This seems to indicate that Simulated Annealing does improve the result (Note option 1 is used). However, it is hard to say that SA can make convergence faster or not, since convergence time with and without SA yields similar running time.