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CSCI 335

Assignment 3 - Report

This report will compare the performance of the Nearest Neighbor algorithm along with its optimal tours for these following countries: Ireland, Yemen, Egypt and Tanzania.

Method: Nearest Neighbor

Country	Tour	Time Taken (ms)
Ireland	259165	11345ms
Yemen	298958	6154ms
Egypt	222335	8505ms
Tanzania	499448	9776ms

Method: Optimal

Country	Optimal Tour	Optimal Time Taken
Ireland	206128	743371 seconds
Yemen	238314	236494 seconds
Egypt	172386	N/A
Tanzania	394609	1556 hours

The Nearest Neighbor algorithm I implemented demonstrated decently good solution regarding the tours and the execution time. The optimal solution shows better tour but the time is much longer than my data. We can observe in through these tables that the trade-off of is lack of optimaility. We can conclude that Nearest Neighbor algorithm can be used to provide approximate and optimal solutions, with some requiring extensive computation resourses.