

Project 2 Report

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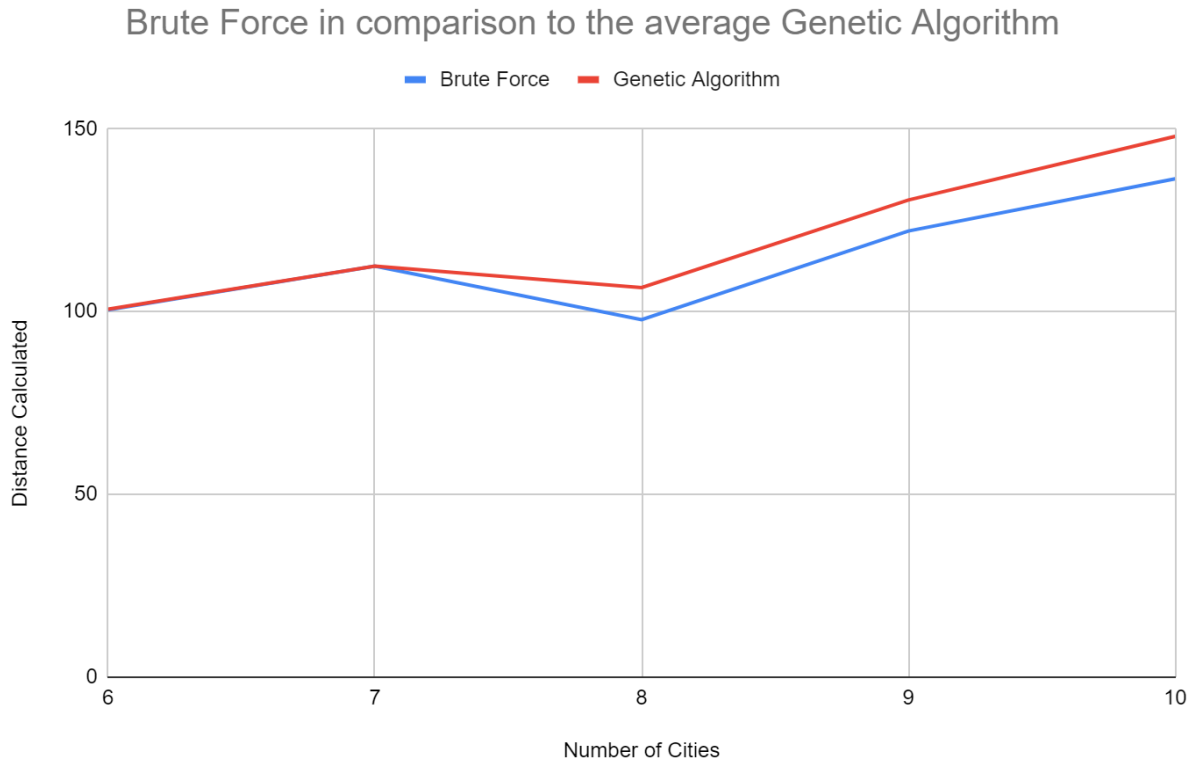


Figure 1

To compare the Brute Force algorithm to the Genetic algorithm, I needed to take a couple of factors into consideration. First, genetic algorithms are not guaranteed to be accurate every single time. Additionally, the Brute Force algorithm will always be correct and represent the lowest quantity possible for the distance calculation. At best, the genetic algorithm should only slightly meet or exceed the brute force answer. To account for this, I ran ten genetic algorithm trials and took the average, as seen in the graph above (Figure 1). As the number of cities grows, the data pool increases, and the variation becomes more noticeable. In testing, the ten-city trial was able to generate responses; however, the trial shown in the graph above did not correctly obtain the distance a single time. A larger sample size would be a more accurate representation of the accuracy.