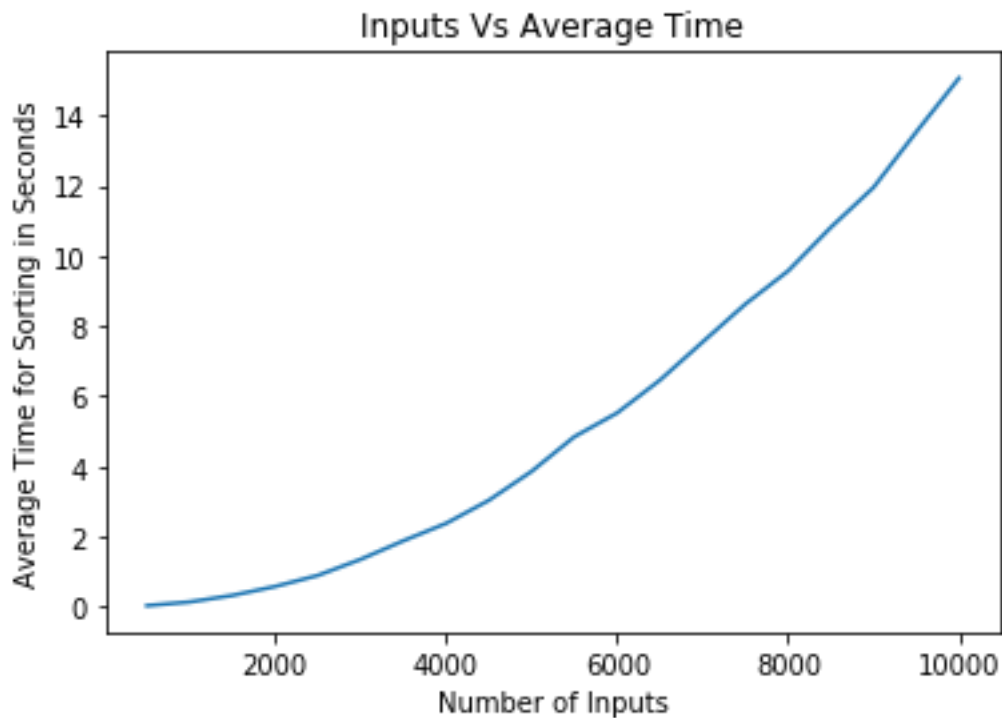


a)The Plot



b)The Discussion

1-The graph above is quadratic even if it looks like exponential.

2-This is because the time complexity of bubble sort is $O(n^2)$.

3-The running time will improve if the elements are sorted.

Because the time complexity for bubble sort is $(2n+3)*n=O(n^2)$. If the elements are sorted it will skip the inner while loop and time complexity will be $3n=O(n)$.