

Sorting Algorithms Analysis

Tristan Chivers

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1 Algorithms

The following sorting algorithms were implemented into my program: QuickSort, InsertionSort, BubbleSort, and SelectionSort.

Initial Thoughts Knowing the general runtimes of these algorithms, I was not surprised by which ones were faster than others. However, I was shocked by just how different they were.

2 Data

For example, here is the time duration for each method sorting through 180,435 numbers:

BubbleSort: 178.005 seconds
SelectionSort: 88.8178 seconds
InsertionSort: 49.1516 seconds
QuickSort: 1.42191 seconds

3 Conclusions

It really is amazing just how much faster QuickSort is compared to other algorithms. It was also shocking to see just how slow BubbleSort is, and how it really is only practical for small data sets and for quick implementation.