Sorting Algorithms: Number of Operations

Sorting_File	Bubble	Selection	Insertion	Shell	Merge	Quick
Unsorted	93801525	62558837	43900703	762851	693785	424682
Unsorted2	93947943	62558185	44061185	796829	693173	455354
Almost_Sorted	63054826	62522600	1348165	495969	643657	3642490
Reverse_Sorted	124995001	68772500	87517493	531529	600665	75027491
Sorted	25000	62522500	34993	330069	591865	112527491

Comments: Firstly, it's interesting to see that regardless on how sorted the data was, *Selection Sort* performs nearly the same amount of operations, with some deviation with a reverse sorted list, but still within the same 10th a million. But this kind of makes sense beacuse we're always basing our comparison to the minimum element. Similar comments could be made about the consistency of *Merge Sort* even if it shows slightly more variation. Another observation to be made is in the case of an already sorted list. It shows to be the most different, with exception to *Selection Sort*, in the count of operations. In the case with *Bubble Sort* and *Insertion Sort*, we see a decrease of operations made by a magnitude of a thousand and a hundred respectively. On the flip side, we see that *Quick Sort* performed the worst of the sorted set, while not relatively not as drastic as the previous examples, but still substantial relative to the performance across other kinds of data.