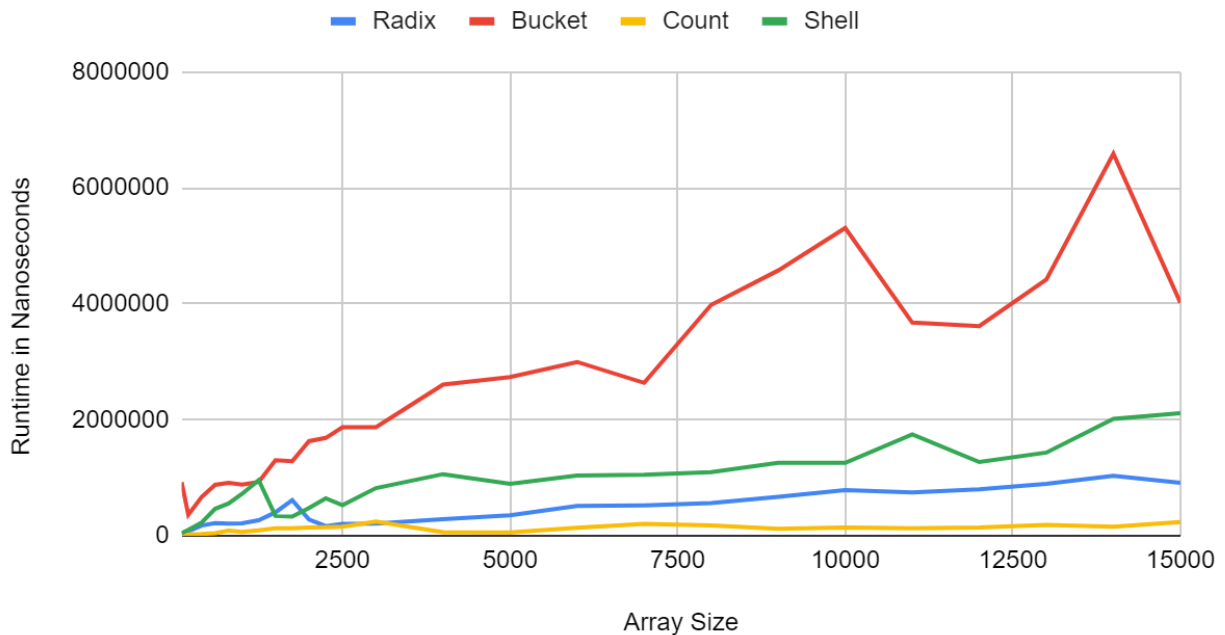


Radix, Bucket, Count and Shell Sort Runtime Curves



**Tabular format with individual Theoretical Complexities on Excel Sheet.

The runtimes roughly correspond to their theoretical complexities. Bucket sort aligns, demonstrating its worst-case $O(n^2)$ complexity, with count sort showing its near $O(n)$ Complexity, relative to the other 3. Shell sort shows its general $n \log n$ complexity, however being fundamentally determined by an arbitrary gap sequence for no definitive worst-case complexity.

Radix and Count sorts appear to be similar, while Bucket follows a much more exponential curve and shell sort has a greater degree of linearity.

Ranking the sorts on my findings, Bucket is slowest, then shell, radix, and count being the fastest. (At least, with 100-200).