

Sorting Competition

DANISH & KYLE

Results

- ▶ 14th place
 - ▶ Sum of places: 28
 - ▶ Sum of medians: 36749
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- ▶ Prime Factorization method was a concern

Algorithm Explanation

- ▶ Convert data type from an array of strings to an array of longs.
- ▶ Implement quicksort, partitioning the array and comparing the prime factors of the value and the pivot(s).
- ▶ Convert data back and return

Time Complexity

- ▶ Worst/Expected case: $T(n) = O(n^2)$

Interesting Features

- ▶ Integrating our own method for prime factorization

What to do different

- ▶ Modifying quicksort to find the median pivot(s) in linear time, allowing it to partition earlier and would reduce to quicksort's average efficiency, $T(n) = O(n\log(n))$,