

$O(1)$  per add,  $O(n)$  per find, using two sum (hashing).

lower bound: using  $O(n)$  such operations we can solve 3sum.

note. the static version of this problem is called the 3sum-indexing problem, and there are algorithms with  $O(n^{2-\frac{\delta}{3}})$  space and  $O(n^\delta)$  time per query for any  $0 < \delta < 1$  [1].

16 / 16 test cases passed.

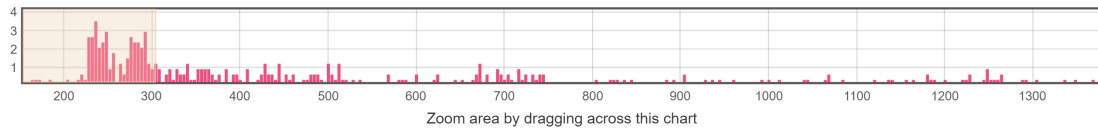
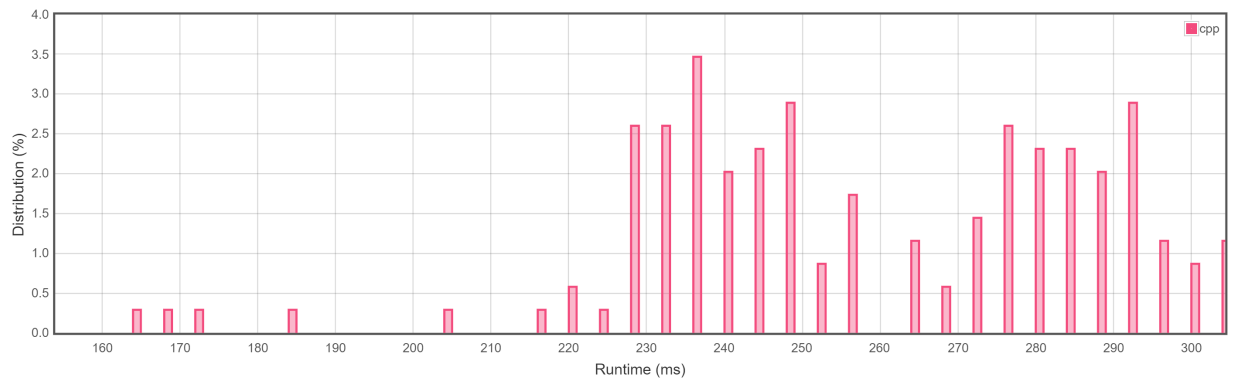
Runtime: 120 ms

Memory Usage: 29.7 MB

Status: Accepted

Submitted: 0 minutes ago

Accepted Solutions Runtime Distribution



Runtime: 120 ms, faster than 100.00% of C++ online submissions for Two Sum III - Data structure design.

Memory Usage: 29.7 MB, less than 5.20% of C++ online submissions for Two Sum III - Data structure design.

## References

- [1] Tsvi Kopelowitz and Ely Porat. The strong 3sum-indexing conjecture is false. *arXiv preprint arXiv:1907.11206*, 2019.