

Minimum Cost to Hire K Workers (/problems/minimum-cost-to-hire-k-workers/)

Submission Detail

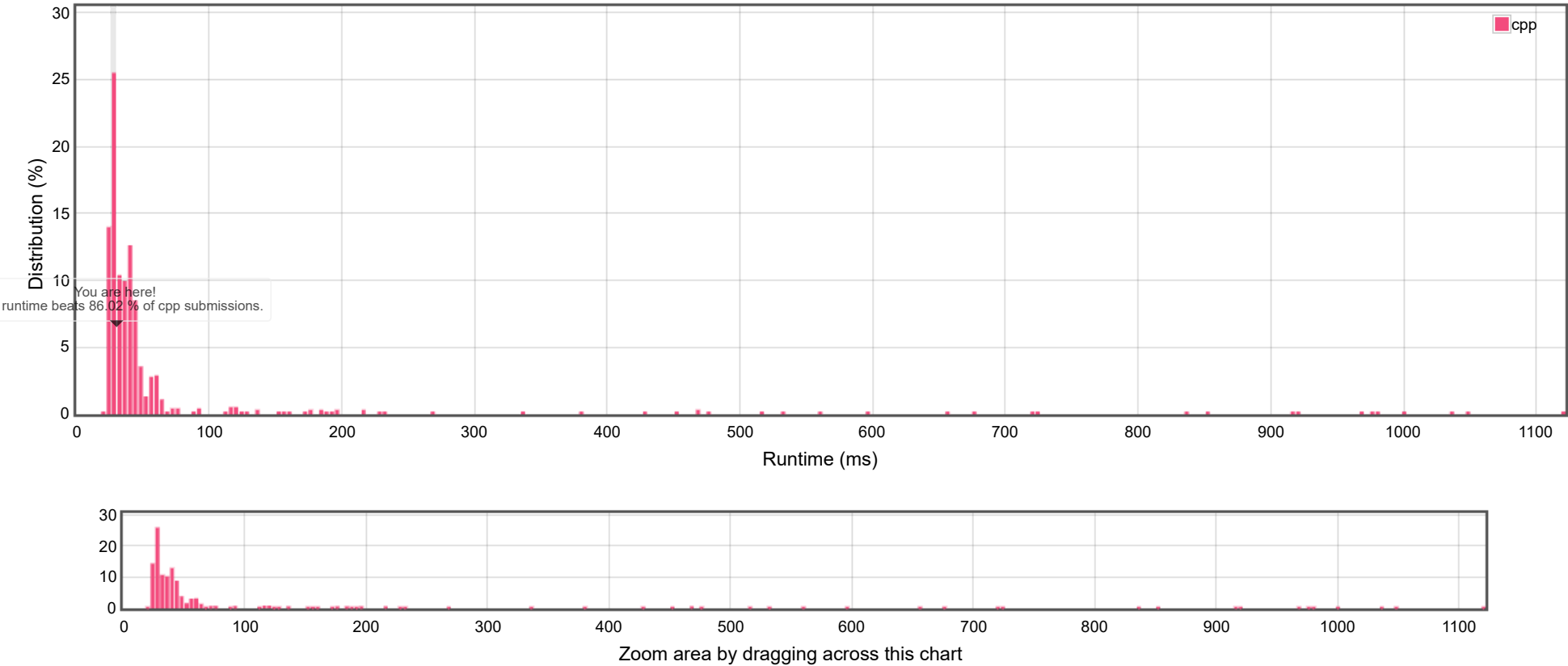
46 / 46 test cases passed.

Runtime: 28 ms

Status: Accepted

Submitted: 33 minutes ago

Accepted Solutions Runtime Distribution



Invite friends to challenge **Minimum Cost to Hire K Workers**

Submitted Code: 33 minutes ago

Language: cpp

Edit Code

```
1  #define MAX 1e11
2  #define EPS 1e-5
3
4  struct Worker {
5      int quality;
6      double ratio;
7      Worker(int q, double r) {
8          quality = q;
9          ratio = r;
10     }
11 };
12
13 struct WorkerCompQ {
14     bool operator()(Worker a, Worker b) {
15         return a.quality < b.quality;
16     }
17 };
18
19 struct WorkerCompR {
20     bool operator()(Worker a, Worker b) {
21         return a.ratio - b.ratio < -EPS;
22     }
23 };
24
25 class Solution {
26 public:
27
28     double mincostToHireWorkers(vector<int>& quality, vector<int>& wage, int K) {
29         int N = quality.size();
30         vector<Worker> workers;
31         for (int i = 0; i < N; i++)
32             workers.push_back(Worker(quality[i], (double)wage[i] / quality[i]));
33         sort(workers.begin(), workers.end(), WorkerCompR());
34         int qsum = 0;
35         priority_queue<Worker, vector<Worker>, WorkerCompQ> q;
36         for (int i = 0; i < K; i++) {
37             q.push(workers[i]);
38             qsum += workers[i].quality;
39         }
40         double cost = qsum * workers[K - 1].ratio;
41         for (int i = K; i < N; i++) {
```

```
43         Worker fired = q.top();
44         q.pop();
45         q.push(workers[i]);
46         qsum = qsum - fired.quality + workers[i].quality;
47         double new_cost = qsum * workers[i].ratio;
48         if (new_cost < cost)
49             cost = new_cost;
50     }
51     return cost;
52 }
53 };
```

[Back to problem \(/problems/minimum-cost-to-hire-k-workers/\)](/problems/minimum-cost-to-hire-k-workers/)

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