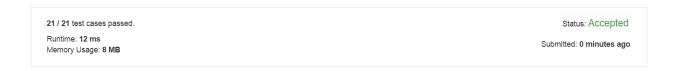
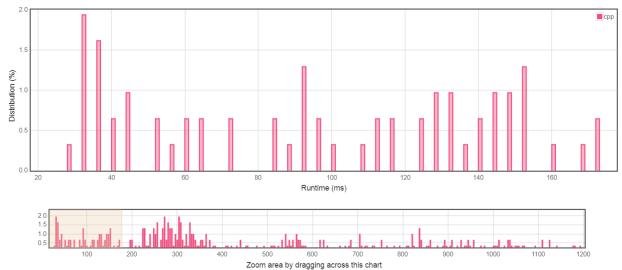
We can reduce the problem to 2D LIS. Let r[i] denote the rank of a[i] in array b (a minor issue is when $\exists j$ s.t. a[i] = b[j]), then the problem is equivalent to find the longest increasing subsequence in a, where a[i] can be followed by a[j] if a[i] < a[j] and we can change $a[i+1,\ldots,j-1]$ to elements in b, which is equivalent to $r[j] - r[i] \ge j - i - 1$, i.e. $r[j] - j \ge r[i] - i - 1$ (the -1 shouldn't affect much). cite?







Runtime: $12\,$ ms, faster than 100.00% of C++ online submissions for Make Array Strictly Increasing.

Memory Usage: 8 MB, less than 100.00% of C++ online submissions for Make Array Strictly Increasing.

References