

Solution 1

```
1 # Copyright © 2020 AlgoExpert, LLC. All rights reserved.
2
3 # O(n) time | O(1) space
4 def subarraySort(array):
5     minOutOfOrder = float("inf")
6     maxOutOfOrder = float("-inf")
7     for i in range(len(array)):
8         num = array[i]
9         if isOutOfOrder(i, num, array):
10             minOutOfOrder = min(minOutOfOrder, num)
11             maxOutOfOrder = max(maxOutOfOrder, num)
12     if minOutOfOrder == float("inf"):
13         return [-1, -1]
14     subarrayLeftIdx = 0
15     while minOutOfOrder >= array[subarrayLeftIdx]:
16         subarrayLeftIdx += 1
17     subarrayRightIdx = len(array) - 1
18     while maxOutOfOrder <= array[subarrayRightIdx]:
19         subarrayRightIdx -= 1
20     return [subarrayLeftIdx, subarrayRightIdx]
21
22
23 def isOutOfOrder(i, num, array):
24     if i == 0:
25         return num > array[i + 1]
26     if i == len(array) - 1:
27         return num < array[i - 1]
28     return num > array[i + 1] or num < array[i - 1]
29
```