Problem 1343: Number of Sub-arrays of Size K and Average Greater than or Equal to Threshold

Problem Information

Difficulty: Medium
Acceptance Rate: 71.20%
Paid Only: No
Tags: Array, Sliding Window

Problem Description

Given an array of integers `arr` and two integers `k` and `threshold`, return _the number of sub-arrays of size_`k` _and average greater than or equal to_`threshold`.

Example 1:

Input: arr = [2,2,2,2,5,5,5,8], k = 3, threshold = 4 **Output:** 3 **Explanation:** Sub-arrays [2,5,5],[5,5,5] and [5,5,8] have averages 4, 5 and 6 respectively. All other sub-arrays of size 3 have averages less than 4 (the threshold).

Example 2:

Input: arr = [11,13,17,23,29,31,7,5,2,3], k = 3, threshold = 5 **Output:** 6 **Explanation:** The first 6 sub-arrays of size 3 have averages greater than 5. Note that averages are not integers.

Constraints:

* `1 <= arr.length <= 105` * `1 <= arr[i] <= 104` * `1 <= k <= arr.length` * `0 <= threshold <= 104`

Code Snippets

C++:

```
class Solution {
public:
int numOfSubarrays(vector<int>& arr, int k, int threshold) {

}
};
```

Java:

```
class Solution {
public int numOfSubarrays(int[] arr, int k, int threshold) {

}
}
```

Python3:

```
class Solution:
def numOfSubarrays(self, arr: List[int], k: int, threshold: int) -> int:
```