

Problem 413: Arithmetic Slices

Problem Information

Difficulty: Medium

Acceptance Rate: 64.82%

Paid Only: No

Tags: Array, Dynamic Programming, Sliding Window

Problem Description

An integer array is called arithmetic if it consists of **at least three elements** and if the difference between any two consecutive elements is the same.

* For example, `[1,3,5,7,9]` , `[7,7,7,7]` , and `[3,-1,-5,-9]` are arithmetic sequences.

Given an integer array `nums` , return _the number of arithmetic**subarrays** of_ `nums` .

A **subarray** is a contiguous subsequence of the array.

Example 1:

Input: nums = [1,2,3,4] **Output:** 3 **Explanation:** We have 3 arithmetic slices in nums: [1, 2, 3], [2, 3, 4] and [1,2,3,4] itself.

Example 2:

Input: nums = [1] **Output:** 0

Constraints:

* `1 <= nums.length <= 5000` * `-1000 <= nums[i] <= 1000`

Code Snippets

C++:

```
class Solution {  
public:  
    int numberOfArithmeticSlices(vector<int>& nums) {  
  
    }  
};
```

Java:

```
class Solution {  
public int numberOfArithmeticSlices(int[] nums) {  
  
}  
}
```

Python3:

```
class Solution:  
    def numberOfArithmeticSlices(self, nums: List[int]) -> int:
```