

Sliding Window Patterns - Complete Reference

Sliding Window Patterns with Multiple LeetCode Problems

Pattern 1: Fixed-size Window (Max Sum of Subarray Size k)

- Leetcode 643 - Maximum Average Subarray I
<https://leetcode.com/problems/maximum-average-subarray-i/>
- Leetcode 1004 - Max Consecutive Ones III
<https://leetcode.com/problems/max-consecutive-ones-iii/>
- Leetcode 239 - Sliding Window Maximum
<https://leetcode.com/problems/sliding-window-maximum/>
- Leetcode 1695 - Maximum Erasure Value
<https://leetcode.com/problems/maximum-erasure-value/>

Pattern 2: Variable-size Window (Min Subarray Length \geq target)

- Leetcode 209 - Minimum Size Subarray Sum
<https://leetcode.com/problems/minimum-size-subarray-sum/>
- Leetcode 713 - Subarray Product Less Than K
<https://leetcode.com/problems/subarray-product-less-than-k/>
- Leetcode 1248 - Count Number of Nice Subarrays
<https://leetcode.com/problems/count-number-of-nice-subarrays/>
- Leetcode 930 - Binary Subarrays With Sum
<https://leetcode.com/problems/binary-subarrays-with-sum/>

Pattern 3: Longest Substring with K Distinct Characters

- Leetcode 340 - Longest Substring with At Most K Distinct Characters
<https://leetcode.com/problems/longest-substring-with-at-most-k-distinct-characters>

- Leetcode 159 - Longest Substring with At Most Two Distinct Characters
<https://leetcode.com/problems/longest-substring-with-at-most-two-distinct-characters/>
- Leetcode 992 - Subarrays with K Different Integers
<https://leetcode.com/problems/subarrays-with-k-different-integers/>
- Leetcode 3 - Longest Substring Without Repeating Characters
<https://leetcode.com/problems/longest-substring-without-repeating-characters/>

Pattern 4: Longest Substring Without Repeating Characters

- Leetcode 3 - Longest Substring Without Repeating Characters
<https://leetcode.com/problems/longest-substring-without-repeating-characters/>
- Leetcode 159 - Longest Substring with At Most Two Distinct Characters
<https://leetcode.com/problems/longest-substring-with-at-most-two-distinct-characters/>
- Leetcode 76 - Minimum Window Substring
<https://leetcode.com/problems/minimum-window-substring/>
- Leetcode 567 - Permutation in String
<https://leetcode.com/problems/permutation-in-string/>

Pattern 5: Check Inclusion / Anagram Match

- Leetcode 567 - Permutation in String
<https://leetcode.com/problems/permutation-in-string/>
- Leetcode 438 - Find All Anagrams in a String
<https://leetcode.com/problems/find-all-anagrams-in-a-string/>
- Leetcode 76 - Minimum Window Substring
<https://leetcode.com/problems/minimum-window-substring/>
- Leetcode 30 - Substring with Concatenation of All Words
<https://leetcode.com/problems/substring-with-concatenation-of-all-words/>

Pattern 6: Max in Each Window of Size k (Deque)

- Leetcode 239 - Sliding Window Maximum
<https://leetcode.com/problems/sliding-window-maximum/>
- Leetcode 480 - Sliding Window Median
<https://leetcode.com/problems/sliding-window-median/>
- Leetcode 1438 - Longest Continuous Subarray With Absolute Diff \leq Limit
<https://leetcode.com/problems/longest-continuous-subarray-with-absolute-diff-less-equal-limit/>
- Leetcode 295 - Find Median from Data Stream
<https://leetcode.com/problems/find-median-from-data-stream/>

Pattern 7: Count Distinct Elements in Window of Size k

- GFG - Count Distinct Elements in Every Window
<https://www.geeksforgeeks.org/count-distinct-elements-in-every-window-of-size-k/>
- Leetcode 992 - Subarrays with K Different Integers
<https://leetcode.com/problems/subarrays-with-k-different-integers/>
- Leetcode 159 - Longest Substring with At Most Two Distinct Characters
<https://leetcode.com/problems/longest-substring-with-at-most-two-distinct-characters/>
- Leetcode 76 - Minimum Window Substring
<https://leetcode.com/problems/minimum-window-substring/>

Pattern 8: Longest Subarray with Sum Exactly K

- Leetcode 325 - Maximum Size Subarray Sum Equals K
<https://leetcode.com/problems/maximum-size-subarray-sum-equals-k/>
- Leetcode 560 - Subarray Sum Equals K
<https://leetcode.com/problems/subarray-sum-equals-k/>
- Leetcode 974 - Subarray Sums Divisible by K
<https://leetcode.com/problems/subarray-sums-divisible-by-k/>
- Leetcode 930 - Binary Subarrays With Sum
<https://leetcode.com/problems/binary-subarrays-with-sum/>

Pattern 9: Binary Subarrays With Sum

- Leetcode 930 - Binary Subarrays With Sum
<https://leetcode.com/problems/binary-subarrays-with-sum/>
- Leetcode 1248 - Count Number of Nice Subarrays
<https://leetcode.com/problems/count-number-of-nice-subarrays/>
- Leetcode 523 - Continuous Subarray Sum
<https://leetcode.com/problems/continuous-subarray-sum/>
- Leetcode 974 - Subarray Sums Divisible by K
<https://leetcode.com/problems/subarray-sums-divisible-by-k/>

Pattern 10: Max Consecutive Ones III

- Leetcode 1004 - Max Consecutive Ones III
<https://leetcode.com/problems/max-consecutive-ones-iii/>
- -fw Leetcode 485 - Max Consecutive Ones
<https://leetcode.com/problems/max-consecutive-ones/>

- Leetcode 487 - Max Consecutive Ones II
<https://leetcode.com/problems/max-consecutive-ones-ii/>
- Leetcode 2958 - Length of Longest Subarray With at Most K Frequency
<https://leetcode.com/problems/length-of-longest-subarray-with-at-most-k-frequency/>

Pattern 11: Minimum Window Substring

- Leetcode 76 - Minimum Window Substring
<https://leetcode.com/problems/minimum-window-substring/>
- Leetcode 567 - Permutation in String
<https://leetcode.com/problems/permutation-in-string/>
- Leetcode 438 - Find All Anagrams in a String
<https://leetcode.com/problems/find-all-anagrams-in-a-string/>
- Leetcode 727 - Minimum Window Subsequence
<https://leetcode.com/problems/minimum-window-subsequence/>