

 <b>Pattern Type</b>	 <b>Unlocking Problem(s)</b>	 <b>What It Teaches</b>
<b>Monotonic Deque</b>	239, 862, 1438, 1696, 1425	Optimize sliding window problems with max/min in $O(n)$
<b>Greedy + Stack</b>	402, 316, 321	Lexicographically smallest/largest results via stack
<b>Prefix Sum + Hashing</b>	560, 974, 325, 930	Count subarrays with given sum/remainder
<b>2-Pointer w/ Invariant</b>	11, 3, 76, 340, 159	Move pointers while preserving constraints (e.g. unique chars)
<b>Digit DP / Bitmask DP</b>	233, 1012, 698, 1879	Rare but powerful — appears in Google/Facebook
<b>Subsequence DP</b>	300, 1143, 712	Build up from smaller subproblems using sequence comparison
<b>Union-Find (DSU)</b>	684, 547, 1319, 1579	Dynamic connectivity problems
<b>Tree Rerooting / DP on Trees</b>	124, 337, 834	DP beyond linear arrays — structured graphs
<b>Meet in the Middle</b>	2025, 1755	Used when $N$ is big (~30), but we can split input
<b>Backtracking w/ Pruning</b>	51, 37, 1263	Reduce exponential search space intelligently
<b>Binary Search on Answer</b>	875, 410, 1482, 774	Binary search when answer lies in range, not array
<b>Sliding Window + Frequency Map</b>	3, 76, 567, 438	Track count of characters in dynamic window