ALL Algorithm Techniques (Easy → Hard)

EASY LEVEL — FUNDAMENTALS

1. Basic Techniques

- Brute Force
- Simulation
- Counting
- Frequency Map
- Sorting basics
- Two loops enumeration

2. Array Techniques

- Prefix Sum
- Sliding Window (fixed)
- Kadane’s Algorithm

3. Hashing

- Hash Map / Set
- Frequency counting
- Missing/repeating numbers

4. Searching

- Linear Search
- Binary Search

5. String Basics

- Palindrome
- Reverse
- Substring brute force

MEDIUM LEVEL — CORE TECHNIQUES

1. Sliding Window (advanced)
2. Binary Search on Answer
3. Recursion & Backtracking
4. Greedy Algorithms

5. Divide and Conquer

6. Matrix Prefix Sum

7. Bit Manipulation

8. Stack Techniques

9. Queue Techniques

HARD LEVEL — ADVANCED ALGORITHMS

1. Dynamic Programming (all types)

2. Graph Theory (DFS, BFS, Dijkstra, MST)

3. Trees (Tries, Segment Trees, Fenwick Trees)

4. Advanced Data Structures (KMP, Z, Manacher)

5. Computational Geometry

VERY HARD / EXPERT

- Max Flow, Min Cut

- Dinic Algorithm

- Bipartite Matching

- Modular Math

- FFT

- CRT