## Roadmap For Practicing Data Structures And Algorithms

- Practice Link
  - <a href="https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms">https://www.codingninjas.com/codestudio/guided-paths/data-structures-algorithms</a>
- Arrays & Strings
  - Basic Array And Strings Questions
  - Kadane's Algorithm
  - Dutch National Flag Algorithm
  - Sliding Window
  - Two pointers
- Multidimensional arrays
  - Traversal Based Problems
  - Rotation Based Problems
- Recursion And Backtracking
  - Basic Recursion Questions
  - Divide And Conquer
- Sorting Algoritms
  - Insertion Sort
  - Selection Sort
- Binary Search Applications
  - Binary Search On Arrays
  - Binary Search On Matrix
- Linked Lists
  - Reversal Problems
  - Sorting Problems
  - Slow And Fast Pointers
  - Modify In Linked list
- Stacks & Queues
  - Implementation Based Problems
  - Application Based Problems

- Binary Trees
  - Tree Traversals
  - Construction Of Trees
  - Tree Views
  - Standard Problems
- BST
  - Construction Of BST
  - Conversion Based Problems
  - Modification in BST
  - Standard Problems
- Priority Queues And Heaps
  - Implementation Based problems
  - Conversion based problems
  - K Based Problems
- Graphs
  - Graph Traversals BFS And DFS
  - MST
  - Shortest Path Algorithms
  - Topological Sort
  - Graphs in Matrix
- Dynamic Programming
  - DP with Arrays
  - DP With Strings
  - DP With Maths
  - DP With Trees
  - Breaking And Partition Based Problems
  - Counting Based Problems
- Hard Recursion And Backtracking Questions
- Other Topics
  - Hashmaps
  - Tries
  - Bit Manipulation

- Greedy
- Circular Queues
- Deques Hot Topic
- Doubly And Circular LL
- String Algorithms like KMP and Z Algorithm