Step-by-Step Data Structures and Algorithms (DSA) Plan

This study plan is designed for average learners with limited time per day. It focuses on core concepts, practical coding, and efficient problem-solving techniques. The plan assumes 2-3 hours of daily study time and spans 7 weeks.

Week	Focus	Topics or Resources
1	Basics of Python	Learn Python basics, Functions, Arrays, Dictionaries (W3Schools, freeCodeCamp)
2	Arrays, Strings, and Basic Data Structures	Arrays, Strings, Stacks, Queues (GeeksforGeeks, CodeWithHarry)
3	Sorting, Searching, and Recursion	Sorting algorithms, Recursion (GeeksforGeeks, YouTube Playlists)
4	Advanced Data Structures	Trees (Binary Trees, BST), Graphs (BFS, DFS)
5	Problem Solving and Practice	Solve problems on Arrays, Strings, Recursion (LeetCode, HackerRank)
6	Dynamic Programming and Revision	Fibonacci, Knapsack, Longest Subsequence (freeCodeCamp, YouTube)
7	Mock Interviews and Complexity	Practice problems, analyze time and space complexity

Daily Routine

1. Warm-Up (15 minutes): Revise key concepts or practice a simple problem.

2. Learning (1 hour): Watch tutorials or read about the day's topic.

3. Coding Practice (45 minutes): Solve problems related to the topic.

4. Review (15 minutes): Analyze solutions and note improvements.

Recommended Resources

- Python Basics: W3Schools, freeCodeCamp

- DSA Tutorials: GeeksforGeeks, CodeWithHarry

DSA Study Plan for Beginners

- Problem Solving: LeetCode, HackerRank
- Visualization: VisuAlgo.net
- Big-O Notation: freeCodeCamp Guides