

Detailed Study Plan for Data Structures & Algorithms (FAANG Prep)

Week 1: Arrays & Two-Pointer Technique

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| Day 1 | Arrays Basics | GeeksforGeeks Arrays Basics PDF | Time: 1 hr | Two Sum, Rotate Array |
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Description: Introduction to arrays, syntax, and basic operations in Python.

Example Problems: Practice problems: Two Sum, Rotate Array

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| Day 2 | Prefix Sum in Arrays | Prefix Sum Explanation - GeeksforGeeks | Time: 1.5 hrs | Subarray Sum Equals K |
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Description: Learn prefix sum for efficient range sum queries within arrays.

Example Problems: Practice problems: Subarray Sum Equals K, Maximum Sum Subarray

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| Day 3 | Two-Pointer Technique | LeetCode Two Pointers Explore | Time: 1.5 hrs | Container With Most Water |
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Description: Explore two-pointer technique for array problems requiring pairwise comparison.

Example Problems: Practice problems: Container With Most Water, Remove Duplicates

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| Day 4 | Sliding Window Basics | Sliding Window - GeeksforGeeks | Time: 1.5 hrs | Longest Substring Without Repeating Characters |
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Description: Using sliding window for subarray problems with fixed or variable window sizes.

Example Problems: Practice problems: Longest Substring Without Repeating Characters, Max Sum Subarray

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| Day 5 | Sliding Window Advanced | Educative Sliding Window Patterns | Time: 2 hrs | Minimum Window Substring |
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Description: Master advanced sliding window techniques for more complex subarray problems.

Example Problems: Practice problems: Minimum Window Substring, Longest Subarray with Sum K

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| Day 6 | Arrays & String Review | - | Time: 2 hrs | Repeat 2-3 problems |
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Description: Review challenging problems on arrays and revisit key concepts.

Example Problems: Recommended: Repeat 2-3 problems

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| Day 7 | Mock Test/Problem Solving Day | - | Time: 2 hrs | Mixed array problems |
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Description: Solve a mix of array-based problems to solidify learning.

Example Problems: Practice problems: Mixed array problems