

Data Structures with C++

Course Book

□ Course Book: Data Structures with C++ (16 Weeks)

This book follows the weekly structure. See each week folder for examples.

Week-by-Week (headlines)

- 01 – Introduction: DS need, C++ refresh (pointers, memory)
- 02 – Arrays: ops, search, sort
- 03 – Strings: ops, search, parsing
- 04 – Singly Linked List: nodes, insert/delete, reverse
- 05 – Doubly & Circular LL: DLL/CLL ops, Josephus
- 06 – Stack: parsing, postfix
- 07 – Queue: circular, deque, priority queue
- 08 – Recursion: ToH, recursive BS
- 09 – Binary Trees & BST: traversals, delete
- 10 – Advanced Trees: AVL, Heaps, heap sort
- 11 – Graph Basics: BFS/DFS, reps
- 12 – Graph Algorithms: Dijkstra, MST, topo
- 13 – Hashing: chaining, open addressing
- 14 – Review & Practice
- 15 – Sorting & Searching: counting, radix, interpolation
- 16 – Applications & Final Project