



A FORUM FOR COMPUTING AND INFORMATICS

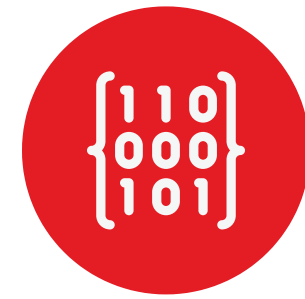
A Venture by Alumni
of NIT Trichy

Competitive Programming: Advanced

(For Contests and Coding Interviews)

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www.therootlearning.com



Intermediate

Mathematics for Competitive Programming

- Numerical Algorithms
- Proofs
- Functions
- Relations
- Statistics
- Probability
- Computational Geometry
- Graph Theory
- Matrices and Matrix Algebra
- Hashing



Searching Algorithms

- Ternary Search
- Jump Search
- Exponential Search
- Sublist Search
- Fibonacci Search

Sorting Algorithms

- Shell Sort
- Radix Sort
- Binary Tree Sort
- Heap Sort
- Address Calculation Sort
- Modified and Randomized Quick Sort





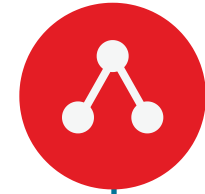
Algorithmic Techniques

- Greedy Programming
- Divide and Conquer
- Backtracking
- Dynamic Programming



Graph Traversal Algorithms

- Graphs
- Breadth First Search
- Depth First Search
- Shortest Path Algorithms
- Spanning Tree Algorithms



Data Structures

- Circular Queue
- Priority Queue
- Balanced Binary Search Trees
- B-Trees
- Heap
 - Min Heap
 - Max Heap
- Hash Tables
- Hashing functions
- AVL Trees
- AVL Tree Rotations
- Segment Tree
- Fenwick Tree

CODE

600+
problems
from
scratch

CRACK CODING INTERVIEWS



FEES: Rs. 20,000

Duration: 6 Months

- Participate in 8+ Online Contests with our mentorship
- Crack Coding Interviews @ FAANG and Big-Tech Companies

* Prerequisite: Competitive Programming - Intermediate