LEARN 2 EARN

LABS

Data Structure & Algo

Help you become a better programmer

Curriculum Brochure

Data Structure & Algorithms

TRAINING

Data structures and algorithms are essential components of computer science and are used in virtually every aspect of technology. Data structures provide a way of organizing and storing data in a computer's memory, while algorithms provide a set of instructions for manipulating that data. By understanding these concepts, developers can create efficient and scalable software that can handle large amounts of data and perform complex computations.

The scope of data structures and algorithms is broad and extends to various domains, including software development, artificial intelligence, machine learning, big data, and cybersecurity. In software development, data structures and algorithms are used to design efficient programs, optimize performance, and reduce memory usage. In artificial intelligence and machine learning, algorithms are used to analyze and process data to develop predictive models and decision-making systems. In big data, data structures and algorithms are used to manage and analyze large datasets efficiently, while in cybersecurity, they are used to protect data from unauthorized access and ensure its integrity.

Learning data structures and algorithms is essential because many software development and engineering jobs require knowledge of data structures and algorithms. Employers often use algorithmic challenges to assess a candidate's programming abilities and analytical skills during the hiring process. By mastering data structures and algorithms, job seekers can increase their chances of securing a job in the technology industry.

By understanding how to design and implement efficient algorithms and data structures, developers can create software that can handle large amounts of data and scale to meet increasing demand. This knowledge is particularly valuable in domains like big data, where efficient data management and analysis are essential.

With data structure, job seekers can develop a solid foundation in computer science that can be applied to various domains, including software development, artificial intelligence, machine learning, big data, and cybersecurity.

In conclusion, data structures and algorithms are essential components of computer science and are used in virtually every aspect of technology. By mastering these concepts, job seekers can increase their chances of securing a job in the technology industry, develop high-performance and scalable software applications, and gain a solid foundation in computer science that can be applied to various domains.

Data Structure Training Program

This program is designed to train students with the skills and experience to understand the algorithms & data structures to write more clear and concise code by using optimized memory and reducing the runtime complexity.

Practical Based Sessions
Training program available in four months & six months duration

Dummy Projects
To build your hands-on expertise & portfolio

Resume Building Assistance
To create an attractive resume for your candidature

Interview Preparation
So you can present your skills in a better way

Mentoring & Job Assistance
To help you in getting good career or placements

Who can join

Any student can join the C++ programming training program . The student must have interest in programming with basic c programming and basic computer knowledge.

Students from any specializations of B.Tech / M.Tech / BCA / MCA / B.Sc. / M.Sc, who are looking to learn programming and enhance their practical skills can join the C++ programming training program.

Working professionals or job seekers, who are looking to enhance their programming skills can join the C++ programming training program.

Training Mode

Online Live Classes are available

- 4x more effective way of learning
- Hands-on experience with projects & assignments
- Virtual class with real interaction with trainer
- Monitoring support & troubleshooting issues
- Masterclass from industry experts & leaders
- Live class recordings for revision purpose

Data Structure & Algorithms Training in Agra

Learn2Earn Labs

F-4, First Floor, Anna Ikon Complex, In Front of Deviram Food Circle, Sikandra-Bodla Road, Sikandra, Agra, Uttar Pradesh – 282007

Call : +91-9548868337

Training Modules

Objectives :

The course aims to teach students how to design, implement, and analyze algorithms and data structures that can solve a wide range of computational problems. By the end of the course, students will have a solid understanding of data structure and algorithmic design principles, as well as the ability to apply them to solve real-world computational problems, and prepare them for a career in the technology industry by equipping them with the knowledge and skills needed to become proficient programmers.

Module 1 : Introduction

What is an algorithm, Data Structure and Types, Asymptotic Notations, Master Theorem, Divide and Conquer Algorithm.

Module 2 : Exploring Data Structure

Stack, Queue, Types of Queues, Circular Queue, Priority Queue, Deque, Linked List, Linked List Operations, Types of Linked List, Hash Table, Heap Data Structure, Fibonacci Heap, Decrease Key and Delete node from Fibonacci Heap

Module 3 : Tree Based Data Structure

Tree Data Structure, Tree Traversal, Binary Tree, Full Binary Tree, Perfect Binary Tree, Complete Binary Tree, Balanced Binary Tree, Binary Search Tree, AVL Tree, B Tree, Insertion into B-tree, Deletion from B-tree, B+ Tree, Insertion on a B+ Tree, Deletion from a B+ Tree, Red Black Tree, Insertion in Red Black Tree, Deletion from Red Black Tree

Module 4 : Graph Based Data Structure

Graph Data Structure, Spanning Tree, Strongly Connected Components, Adjacency Matrix, Adjacency List, DFS Algorithm, Breadth-first Search, Bellman Ford's Algorithm

Module 5 : Sorting & Searching Algorithms

Bubble Sort, Selection Sort, Insertion Sort, Merge Sort, Quick Sort, Counting Sort, Radix Sort, Bucket Sort, Heap Sort, Shell Sort, Linear Search, Binary Search

Module 6 : Greedy Algorithms

Greedy Algorithm, Ford-Fulkerson Algorithm, Dijkstra's Algorithm, Kruskal's Algorithm, Prim's Algorithm, Huffman Code

Module 7 : Dynamic Programming

Dynamic Programming, Floyd Warshall Algorithm, Longest Common Subsequence

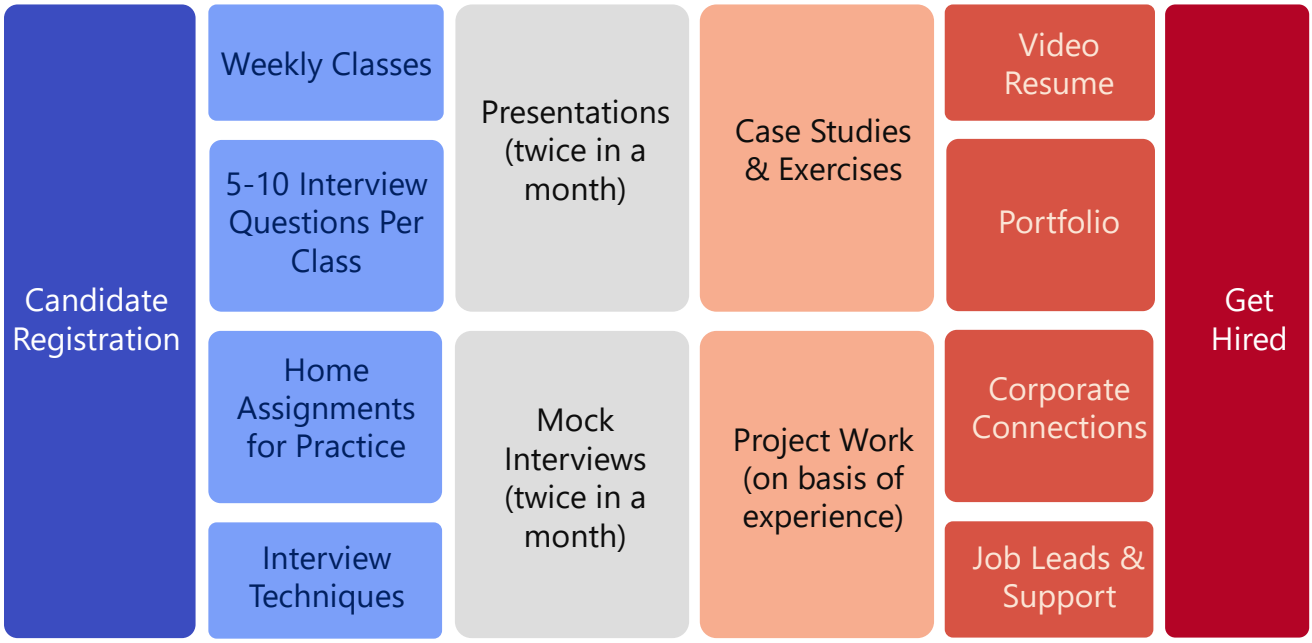
Module 8 : Assignments & Interview Preparation

The candidate will get trained in respect of cracking the viva and interviews.

We follow a dynamic & vibrant
Job Assistance Execution Path

In present scenario providing job surety is easy, only we need to focus on outcome based learning and practical work enhancement. We know that every candidate is enough capable to understand the concepts and implement those concepts for improving his/her practical knowledge and experience.

Hence we are following a dynamic & vibrant Job Assistance Execution Path while conducting our job guarantee training programs and job assistance training programs. We are proud to say that we prepare candidates who can perform better throughout their professional journey and will always remains unbeatable.



We also offers
Variety of Job Oriented Training Programs

Java Full Stack
Duration : 4 months | 6 Months

Full Stack Web Development
Duration : 4 months | 6 Months

8 LPA+
Job Guarantee
Full Stack Software Engineer
Duration : 1 Year | 600 Hours

Cloud Computing & DevOps
Duration : 4 months | 6 Months

Digital Marketing
Duration : 6 months | 1 Year

Data Science & ML
Duration : 4 months | 6 Months

Learn2Earn Labs

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