

Algorithms & Data Structures

Algorithms are one of the most important aspect of coding. Algorithms are like procedure or steps you follow to solve a program in the most efficient way possible. Algorithms help us to solve the programs. We need to design efficient algorithms so that our code works faster.

There are many different algorithms we can use to solve our programs. For this purpose, we need to get acquainted to the algorithmic tools we can use and where to use. There is a non-exhaustive list of algorithms but we need to learn the most important ones to get better in solving problems efficiently.

Here we are going to discuss about some of the most common algorithms you definitely need to know to become a good programmer.

Data Structures are a particular way to organize data in a program so that we can use those data efficiently in solving various problems. They are a collection of data which we use in programs. Using data structures make our program smore efficient and easier to understand and maintaining the code gets easy too!

Data Structures and Algorithms both are very important for any programmer be it for solving coding challenges, interview preparation or in solving real world problems.

Top companies usually ask data structures and algorithms questions in their technical interviews so preparing data structures and algorithms are very important for any student.

So, we will be covering many important data structure and algorithmic tools which are commonly being used in detail.

Examples of algorithmic tools: searching, sorting, greedy algorithms, dynamic programming etc.

Examples of data structures: arrays, strings, hash maps, tries, graphs etc.

For now, we are not going to add full DS and Algo theory here as it's a very vast topic but we will be providing various questions for you to practice.

We strongly recommend you to be following these books for better understanding of DS and algorithms since these are not simple topics but require thorough understanding so a book with detailed theory and questions would be absolutely better. So, our list of recommended books is: -

1. [Data Structures and Algorithms Made Easy](#)
2. [Cracking the Coding Interview](#)
3. [Introduction to Algorithms](#)
4. [Coding Interview Questions](#)

These books are great for interview preparation and for greater clarity of thoughts in DS and algorithms.

