

SUPER 30

Course Curriculum

Transforming You into a 10x Software Engineer
for MAANG Companies.

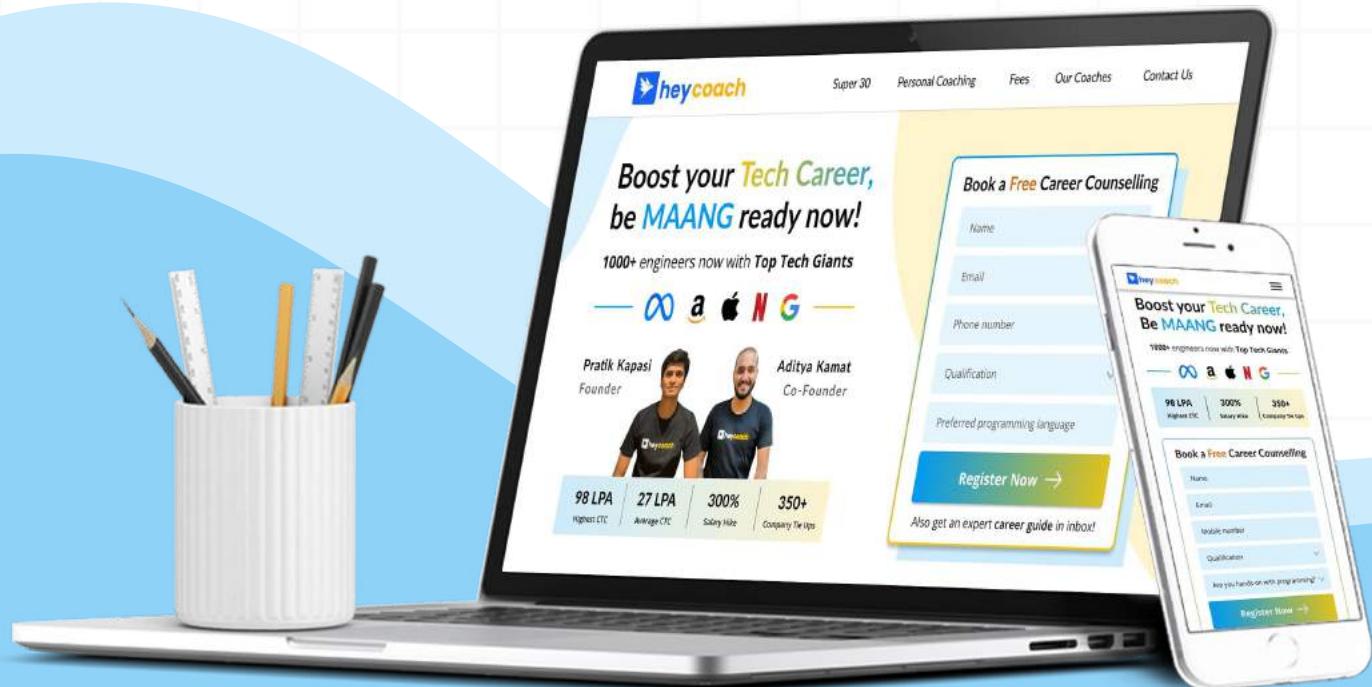


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Why you should **UPSKILL?**

"Tech Professionals, Upskilling Is Your Secret Weapon!"

Higher Salary Potential: Upskilling can lead to certifications and qualifications that often translate to higher earnings.

Leadership Opportunities: 60% of tech leaders emphasise that continuous learning & skill development directly impacts promotion to leadership roles.

Innovation and Creativity: Upskilling fosters innovation; tech professionals who continually learn are 45% more likely to create new products or solutions.

Global Opportunities: The global demand for tech talent is rising, with a projected shortfall of 4.3 million tech professionals by 2030.

30%

Tech professionals who upskill earn 30% more than their non-upskilled peers. *Source: LinkedIn*

#1

Software Development: In-Demand Job in the IT Domain across India and the globe.

86,000+

Software Engineer Positions open in India and expected to increase to 21% by 2028 globally.

1.2+ Crores

Potential to earn salaries upto 1.2 Cr and more as a Software Development Engineer.

Introduction to **SUPER 30**

Overview

HeyCoach is dedicated to simplifying your growth journey by providing personalized guidance and support, ultimately helping you secure opportunities in top-tier product companies.

In the exclusive Super 30 program the most passionate and committed candidates are selected from a pool of applications. They are coached for 4 months on everything that is required to get into top product-based companies like **Google, Meta, Amazon, Apple, Microsoft, Flipkart & more.**

High CTC Achievements

A peak CTC of 98 LPA, showcases the program's effectiveness. The average CTC learners have been prepared for is 27 LPA.

Company Referrals

After successful completion of the program learners can expect to be referred to top product companies matching their profile.

Signature Frameworks

Remain one step ahead with access to exclusive tools like DSA MindMap, DSA Visualiser, and the Great Pyramid Test.

Professional Coaches

Learn directly from top-tier industry experts hailing from tech giants like Google and Amazon in our cutting-edge program.

Course

STRUCTURE

Advance Data Structures

MONTH 2

Moving towards advanced data structure concepts, learn essential topics frequently asked in tech rounds.

Interview Preparations

MONTH 4

Improve interview skills via company specific mock interviews covering LLD & HLD. Also, practice interview questions on designing Google Maps & Uber at scale.

1

2

3

4

5

Basic Data Structures

MONTH 1

Start with learning the basic data structures & algorithms which will act as building blocks as you move forward.

System Design

MONTH 3

Finishing up with your DSA preparation, start your system design preparation with low-level system design.

Placement Assistance

NEXT 12 MONTHS

We will be in touch with you for the next 12 months to help you find your dream workplace through referrals.

Diving in Deep

MODULE 1

Basic Data Structures

Introduction

In our Basic Data Structures module, we delve into the fundamentals of Time Complexity, Sorting, and Searching, alongside a comprehensive exploration of core structures including Arrays, Strings, Sets, Hashmaps, Stacks and Queues.

Outcomes

- **Efficient Data Retrieval:** Mastery of hashmaps and arrays enables rapid data access & manipulation, crucial for high-performance computing tasks.
- **Improved Problem-Solving:** Knowledge of stacks and queues aids in developing algorithms for real-time processing and recursive computations, enhancing logical problem-solving skills.
- **Optimised Sorting and Searching:** Proficiency in sorting and searching algorithms increases the efficiency of data organisation and retrieval, essential for database management and data analysis.

Importance

Learning Basic Data Structures and Time Complexity leads to real-world skills like optimizing social media data retrieval with hashmaps & improving e-commerce search efficiency, essential for modern tech solutions.

Companies that focus on this module



Diving in Deep

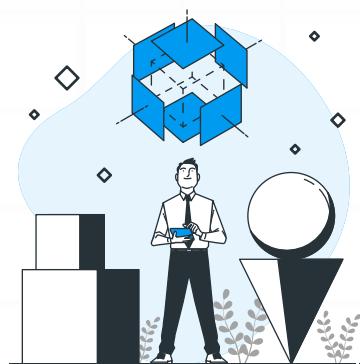
MODULE 1

Basic Data Structures

WEEK 1

Building Blocks & Basic Algorithms

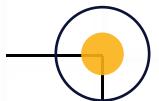
Proficiency in Time Complexity & Sorting is essential for e-commerce platforms, ensuring rapid product search results & efficient order processing.



- **Time Complexity** - Notations, Methods, Master Theorem
- **Sorting** - Bubble, Selection, Insertion, Divide & Conquer Approach, Merge, Quick, Analysis

Evaluations

- **Coding Test**
- **Levelling Test** - Personalised test from The Great Pyramid



WEEK 2

Basic Data Structures

Searching optimises web search engines, like Google, ensuring fast retrieval of relevant information. Strings optimise airline reservation systems for passenger name recognition.



- **Searching** - Binary, Ternary Search, Complexity Analysis
- **Arrays** - Functions of array, Types of questions, solving application-based problems
- **Strings** - Theory, Question Pattern in Strings, solving application-based problems

Evaluations

- **Coding Test**
- **Levelling Test**

Diving in Deep

MODULE 1

Basic Data Structures

WEEK 4

Basic Data Structures and Dynamic Programming

Stacks assist in tracking recently used apps on smartphones for quick access. Queues optimise order processing in e-commerce, ensuring timely delivery.



- **Stacks** - Basic functions & uses, Problem Solving
- **DP** - Identification of sub-problems, Memoization, Implementation of memoization, Tabulation

Evaluations

- Coding Test
- Interview Preparation

WEEK 3

Basic Data Structures and Dynamic Programming

Sets enhance gaming leaderboards, tracking player scores without duplicates. Hashmaps helps to drive GPS navigation systems in combination with graphs, storing and retrieving location data.



- **Sets** - Theory and basic functions
- **Hashmaps** - Basic Functions, Usage, DB Applications
- **Problem Solving** - Radix Sort, Bucket Sort, Counting Sort
- **Queues** - Basic Functions, When to use Queues

Evaluations

- Coding Test
- Levelling Test

Diving in Deep

MODULE 1

Basic Data Structures

WEEK 5

Basic Data Structures

Dynamic Programming enhances video streaming quality by adaptive bit rate control.

Think Netflix!



- Dynamic Programming - Implementation of DP, Time Complexity, Problem Solving, Buffer Session

Evaluations

- Coding Test
- Levelling Test

Next Module →

MODULE 2

Advance Data Structures

Diving in Deep

MODULE 2

Advance Data Structures

Introduction

Advanced Data Structures empowers you to excel computational problem-solving by emphasizing space-time trade-offs and algorithmic paradigms, crucial for complex systems and large-scale data challenges.

Outcomes

- **Introduction to Trees:** Gain expertise in using Binary Trees, AVL Trees, Red-Black Trees, for efficient data organization & retrieval.
- **Binary Search Trees:** Implementation and when to use BST.
- **Graph Algorithms Proficiency:** Develop skills in implementing graph algorithms like Dijkstra's, Bellman-Ford, and Floyd-Warshall for solving complex network-based problems.
- **Understanding of Trie Usage:** Learn how to implement and use tries for efficient word retrieval and auto-completion, useful in search algorithms and text processing.

Importance

Mastering advanced data structures arms learners with skills to implement efficient algorithms in product-based interviews.

Companies that focus on this module



Diving in Deep

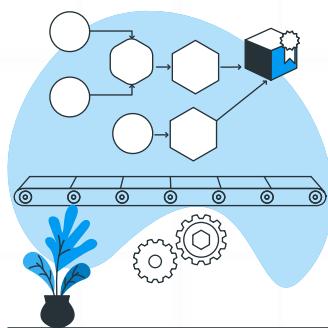
MODULE 2

Advance Data Structures

WEEK 6

Advance Data Structures

In inventory systems, Linked Lists manage stock levels for restocking alerts. In social networks, Linked Lists store and display friend connections.



- **Linked Lists 1** - Basic functions, Solving Problems on Linked Lists
- **Fireside Chat** - FireSide Chat with a MAANG Recruiter
- **Hiring Manager Round** - Scenario questions, Soft Skills and more.

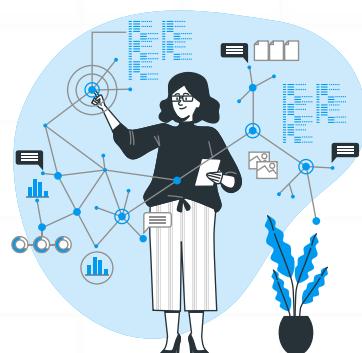
Evaluations

- Coding Test
- Levelling Test

WEEK 7

Advance Data Structures

In genealogy tracking, e-commerce product searches, and autocomplete, Binary Trees, Binary Search Trees, and Tries are versatile.



- **Binary Trees** - Conceptual understanding of Binary Trees
- **Binary Search Trees** - Implementation of Trees and BST, Solving Problems
- **Tries** - Implementation of Dictionary

Evaluations

- Coding Test
- Levelling Test

Diving in Deep

MODULE 2

Advance Data Structures

WEEK 9

Graph Algorithms

Graphs power flight route planning, ensuring timely and cost-effective travel.



- **BFS & DFS** - Shortest Path Algorithms, Solving problems on BFS and DFS
- **Minimum Spanning Trees** - Kruskal, Prims Implementation of MST
- **Greedy** - Activity of selection problem, Huffman Encoding & Decoding

Evaluations

- Coding Test
- Levelling Test

WEEK 8

Advance Data Structures

In gaming, Heaps organise character movement in real-time simulations. Heaps also guide path planning for autonomous vehicles.



- **Heaps** - Heapify , Min and Max Heap, Priority Queues, Time and Space Analysis

Evaluations

- Coding Test
- Levelling Test

Diving in Deep

MODULE 2

Advance Data Structures

WEEK 10

Advance Data Structures

Graphs, Backtracking, and Recursion optimize code execution in software development. Recursion and backtracking are used in creating AI for games like chess or checkers to evaluate possible moves and their outcomes.



- **Graphs** - Problem solving
- **Backtracking & Recursion** - Concept understanding & Problem solving
- **Patterns** - Common patterns to identify data structures from Mind Map

Evaluations

- Coding Test
- Levelling Test

Next Module →

MODULE 3

DSA & System Design

Diving in Deep

MODULE 3

System Design

Introduction

System design involves planning and organising a system's structure, defining its components, architecture, and data flow, ensuring scalability, reliability, and efficiency in meeting specific requirements.

Outcomes

- **Efficient System Architecture:** Mastery of low-level and advanced design concepts enables the creation of efficient and scalable software systems.
- **Optimized Database Management:** Understanding database concepts enhances data storage and retrieval, crucial for data-driven applications.
- **Concurrency Control Proficiency:** Knowledge of OS concurrency ensures robust handling of multiple tasks and processes involved in complex software systems.

Importance

Proficiency in System Design empowers engineers to architect scalable, efficient platforms like designing a cloud-based file storage system or optimising a high-traffic e-commerce website for peak performance.

Companies that focus on this module



Diving in Deep

MODULE 3

System Design

WEEK 11

Low Level Design

Design Patterns and Low-Level Design enhance database systems, ensuring data integrity and efficiency.



- Object Oriented Programming - Implementations
- Introduction to Design Patterns - Need and implementation
- Low-Level Design - Library Management System
- Advanced low-level Design - Building advanced systems, extensive systems.

Evaluations

- Hands-on Game Development
- Levelling Test

WEEK 12

High Level Design Concepts

Manufacturing processes benefit from Networking, Database, Memory Management, and Concurrency for process control and data analysis



- Networking Concepts - Protocols, CSN P2P Network
- Database Concepts - Partitioning, Indexing, MSA
- Memory management concepts - Paging, Segmentation, DFS, CES
- OS Concepts on Concurrency - Multithreading, Concurrency

Evaluations

- Demo MAANG interview
- Levelling Test

Diving in Deep

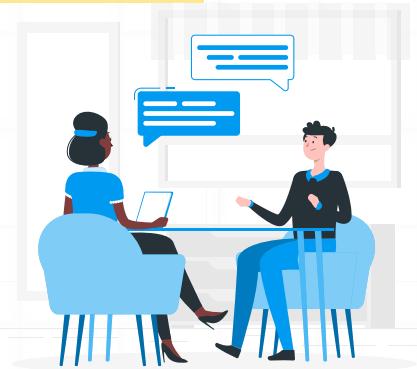
MODULE 3

System Design

WEEK 13

High Level Design Interview Prep

In platforms like Amazon, system design is critical for handling millions of transactions and user interactions, ensuring fast, reliable service.



- **System Design Concepts** - Understand the crucial roles of REST APIs and Load Balancers in building scalable, efficient systems.
- **Approach** - Start with identifying requirements and estimations, then detail essential components.
- **Deep Dive** - Address single point of failure concerns and strategies for robust, large-scale system management.
- **Question** - Designing a system like Netflix, Microservices

Evaluations

- System Design Test
- Levelling Test

Next Module →

MODULE 4

Interview Preparations

Diving in Deep

MODULE 4

Interview Preparations

Introduction

The interview preparation module covers system design, focusing on high-scale applications like Google Maps and Uber. Enhance your algorithmic understanding with Union Find and Topological Sort, delve into the complexities of Self Balancing Trees, and sharpen your skills in Bit Manipulation to stand out in tech interviews.

Outcomes

- Become proficient in designing large-scale systems, ready to tackle complex challenges at companies like Google and Uber.
- Excel in tech interviews with a deep understanding of algorithms and data structures, from Union Find to Self Balancing Trees.
- Sharpen your problem-solving skills with advanced techniques in Bit Manipulation, setting you apart in competitive tech roles.

Companies that focus on this module



Diving in Deep

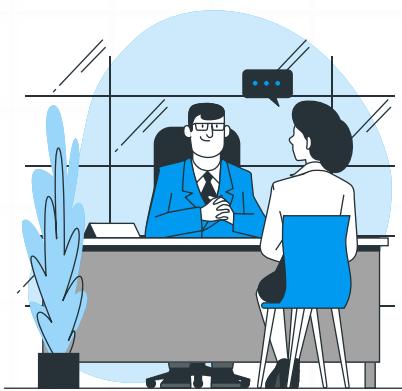
MODULE 4

Interview Preparations

WEEK 14

MAANG System Design Interviews

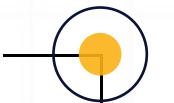
Work on Industry-scale projects to enhance your understanding.



- **Question** - Designing Google Maps , Designing Uber at scale
- **Open Session** - Revisiting any topics within System Design
- **Fireside chat** - Fireside Chat with a MAANG Engineering Manager

Evaluations

- System Design Test
- Levelling Test



WEEK 15

Advanced Concepts For Eligible Learners

Union Find algorithms are pivotal in social media platforms for efficiently determining network connectivity and friend suggestions.



- Union Find Topological Sort
- Amortized Time Analysis
- Math for Competitive Programming - Combinatorics
- Self-balancing trees - Red Black Tree, AVL Tree
- Bit Manipulation

Evaluations

- Coding Test Series



Diving in Deep

MODULE 4

Interview Preparations

WEEK 16

MAANG System Design Interviews

Finishing Touches to get you ready for your Final Interview with a Product-Based Company. Are you ready? Let's ensure your skills and confidence are at their peak or not.



- Open Session - Revision on Patterns in CP Questions

Dive deep into recognizing and applying key patterns in competitive programming, a crucial skill for cracking coding interviews.

Evaluations

- Coding Test Series - Placement Test - 3
- Coding Test Series - Placement Test - 4
- Coding Test Series - Placement Test - 5

Next Module →

MODULE 5

Placement Assistance

Diving in Deep

MODULE 5

Placement Assistance

Introduction

The placement assistance extends beyond traditional training. A support duration of 12-months includes tailored interview preparation, company referrals, detailed profile & resume evaluations. This holistic approach significantly enhances our students' career prospects.

Outcomes

- Placement Assistance ensures tech career success with robust interview prep, targeted company referrals, and resume evaluations.
- Gain a competitive edge through personalized mock interviews and a year-long, dedicated support system.
- Leverage our network for unparalleled placement assistance, encompassing strategic profile optimization and industry connections.

Companies that focus on this module



Diving in Deep

MODULE 5

Placement Assistance

12-months Support

HeyCoach offers a full year of dedicated support, providing continuous guidance and assistance for tech career growth.

Company Referrals

Our placement assistance includes company referrals, connecting learners directly with top tech firms, and opening doors to valuable career opportunities.

Mock Interviews

Benefit from our mock interview sessions, a pivotal component of our placement support, designed to refine your interview skills and boost your readiness for real-world tech interviews.

Interview Preparation

Our interview preparation feature sharpens candidates' abilities with focused training and expert feedback, enhancing their performance in tech interviews.

Profile & Resume Evaluation

Supercharge your career path with our profile and resume evaluations, amplifying your attractiveness to top-tier employers.

Super 30

OUTCOMES

96 LPA

Highest CTC

300%

Salary Hike

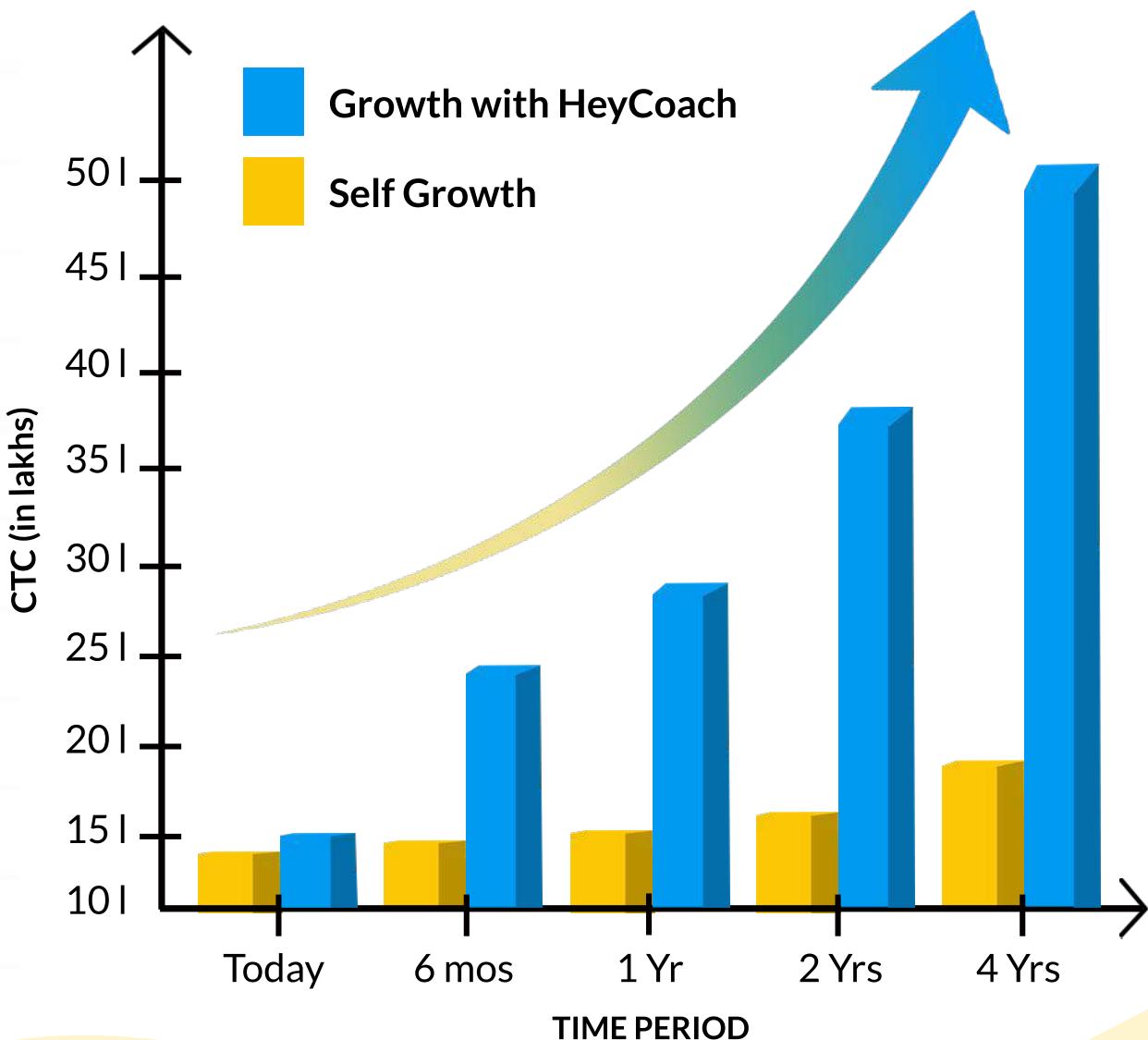
27 LPA

Average CTC

350+

Company Tie-Ups

"Tech Professionals, Upskilling Is Your Secret Weapon!"



Success STORIES



HeyCoach was instrumental in helping me switch my company to product-based RazorPay. Their special focus towards Competitive Programming and mock-interviews gave me the edge required to crack the final interview.

Monark Dedakiya

Software Development Engineer



The personalised course structure helped me become better in various aspects like competitive programming, project development & resume building. Overall, the Super 30 program has been a complete game changer for me.

Vinita Rahul

Software Engineer



HeyCoach not only taught DS & Algorithms but also provided resume reviews, mock interviews & sessions with industry experts. I highly recommend HeyCoach to anyone who wants to get into those awesome tech companies!

Bhavya Karia

Full Stack Engineer





Ready to upskill your career?

Start with learning the basic data structures & algorithms which will act as building blocks as you move forward.

ELIGIBILITY PROCESS

1

Counselling

Our dedicated Learning Consultants will screen your profile and guide you to understand more about our program.

2

Eligibility Form

Mention your tech skillsets, total work experience (if any), past projects & write a fantastic SOP to impress us!

3

Interview

The screening panel will review the forms & may invite you for interview. Tell us what really drives you & we'll listen!

Fastrack your process. Book a Calendly Meet.