RTC Summer Interview Intensive - AlgoExpert Cohort

Welcome to the RTC Tech Interview Intensive Program! You are about to embark on 10 weeks of dedicated practice using the *AlgoExpert* platform, while supporting and being supported by new RTC friends! This is a self-directed program but we hope that with the structure and resources provided by RTC and Algo, you will see your technical Interview skills greatly improve so you are confident entering the recruiting season.

About the Program:

RTC has purchased AlgoExpert subscriptions for all participants. Please follow the guidelines they provided below so that you can make the most of your learning:

- The breakdown of questions in your schedule are color-coded based on difficulty (Easy, Medium, Hard, Very Hard).
- For weeks 1-6, we recommend *not* timing yourself when attempting the questions. Just try to solve them until you're completely stuck or until you pass all the test cases.
- For weeks 7-9, we recommend timing yourself when attempting the questions: 45 minutes.
- For the two "Construction" questions, start by watching the video explanation, and then try to code out the solution.
- For all other questions, try to solve the question, check hints if you get stuck, and watch the video explanation if you're totally stuck or once you've passed all the test cases.
- For all questions, if you didn't come up with an optimal solution, try to code out the optimal solution (one of them if there are multiple) after watching the video explanation; this is a good exercise to retain what you've learnt.
- If you have extra time and are feeling up for it, feel free to do more questions; the more you do, the better prepared you'll be for your interviews! Getting to 100 and beyond is ideal.
- For the first couple of weeks, if you don't have time to complete all the questions, don't worry! You can just push them back to future weeks. As you get better and better, the easy questions will become pretty trivial, and if you have some left to do, they'll serve as warm-up during future weeks.

WEEK	ASSIGNMENT
WEEK 1: May 24-30 • Self-Study assigned patterns	• Watch the entire Data Structures Crash Course • Two Number Sum - E • Nth Fibonacci - E • Binary Search - E • Bubble Sort - E • Generate Document - E • Palindrome Check - E
WEEK 2: May 31-June 6 • **Team Meeting 1** • Self-Study assigned patterns	• Node Depths - E • Validate Subsequence - E • Remove Duplicates From Linked List - E • Minimum Waiting Time - E • Invert Binary Tree - M • Spiral Traverse - M • Reverse Words In String - M

WEEK 3: June 7-13 • **Team Meeting 2** • Self-Study assigned patterns	• Depth-First Search - E • Breadth-First Search - M • River Sizes - M • Kadane's Algorithm - M • Max Subset Sum No Adjacent - M • Reverse Linked List - H
WEEK 4: June 14-20 • **Team Meeting 3** • Self-Study assigned patterns	• Validate BST - M • Permutations - M • Quick Sort - H • Water Area - H • Shift Linked List - H
WEEK 5: June 21-27 • **Team Meeting 4** • Self-Study assigned patterns	• Min Heap Construction - M • Continuous Median - H • Knapsack Problem - H • Smallest Substring Containing - VH
WEEK 6: June 28-July 4 • **Team Meeting 5** • Self-Study assigned patterns	• Suffix Trie Construction - M • Multi String Search - H • Merge Sorted Arrays - VH • Apartment Hunting - VH
WEEK 7: July 5-11 • **Team Meeting 6** • Self-Study assigned pattern	• Maximize Expression - H • Find Nodes Distance K - H • Longest String Chain - VH • Zip Linked List - VH
WEEK 8: July 12-18 • **Team Meeting 7** • Self-Study assigned pattern	• Balanced Brackets - M • Sunset Views - M • Max Path Sum In Binary Tree - H • Calendar Matching - VH • Number Of Binary Tree Topologies - VH
WEEK 9: July 19-25 • **Team Meeting 8** • Self-Study assigned pattern	• Validate Three Nodes - H • Boggle Board - H • Rectangle Mania - VH • Square of Zeroes - VH
WEEK 10: July 26-Aug 1 • **Team Meeting 9** • Self-Study assigned patterns • Schedule last meeting Aug 2-8 to discuss this week's pattern	• Complete an assessment in the Coding Interview Assessments section. **Note:** you could do any assessment, but we'd recommend Assessment 2 or 4.

Weekly Study Team Meeting:

Each registered team will commit to meeting once per week to discuss that week's lesson(s). The day, time, and length of your meeting will be up to each team as well as how you choose to spend that time. Here are some suggestions:

- Study group style - Help each other in areas that you don't understand.

- Interview style - One person will be the interviewer and one the interviewee while other members observe. Take a question and whiteboard it. Discuss what you are doing and how you are getting to the answer. This gives you all practice in talking while whiteboarding and you also learn from watching each other.

Using Discord:

A Discord server has been set up for your cohort (75 RTC members). Each of the study teams will have a text and video channel that will be private to the team. This will allow you to meet face-to-face while also having the ability to share screens and use the text channel simultaneously for your meetings. In addition to the private team space, you can use the server to ask questions and share information with the wider cohort. Take a look at the available channels and descriptions and try to engage across teams. It will surely make the experience better for everyone!

Surveys:

As part of the program, it is required that you complete four surveys designed to help RTC understand your experience and how to improve the program for future iterations. You are the first group of students to be chosen for this program so your thoughts on the experience will be very important to us. You will complete a pre-survey before the beginning of the program, two surveys during the program, and one after the program.