
Columbia ADI

Competitive Programming Primer

Introduction to Quant Interview Preparation

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Yongwhan Lim



Education



Part-time Jobs



Full-time Job



Workshops



Coach/Judge



<https://www.yongwhan.io>

Overview

- **Part I: Interview Preparation**
 - Interview Types
 - Technical Interview
 - Interview Topics
 - Interview Preparation Resources
- **Part II: Competitive Programming**
 - CodeForces
 - ICPC

Part I: Interview Preparation

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- Behavioral Interview
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- Recruiter Call
- 0-1 Online Coding Challenge
 - automated screening with 2-3 questions.
- 2-3 Technical Phone Screens
 - first technical conversation with human.
- 4-7 Interviews in Onsite
 - similar to phone screening but more in-depth; you may get probed on your claimed expertise.
- 0-5 Fit Calls & Negotiation

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Interview Topics

- **Fundamentals**

- Arrays and Linked Lists
- Binary Trees
- Heaps
- Sorting

Interview Topics

- **Important**
 - Stacks and Queues
 - Hash Tables
 - Binary Search Trees
 - Searching
 - Recursion

Interview Topics

- **Real Differentiators**

- **Strings:** Knuth Morris Pratt (KMP); Rabin Karp / String Hashing; Suffix Array; Suffix Automaton;
- **Dynamic Programming:** 1D; 2D; Interval; Tree;
- **Greedy Algorithms** and Invariants: Matroid;
- **Graphs:** Shortest Path; Flow / Matching; Minimum Spanning Tree;

Interview Preparation Resources

- **Popular Websites**

- LeetCode: Solve all four weekly/biweekly problems in **20 minutes!**
- CodeForces: Get to 2200+ rating
- AtCoder; TopCoder; CodeChef;

- **Annual Contests**

- Google Code Jam; Meta Hacker Cup; TopCoder Open;

Interview Preparation Resources

- **Elements of Programming Interview**
- **Competitive Programming 4**

Part II: Competitive Programming

CodeForces

- Get to **2200+** rating as fast as you can!
- Join the training sessions through **ICPC CodeForces Zealots** (<https://discord.gg/7bvMnMyF6G>).

International Collegiate Programming Contest (ICPC)

- If you would like to get involved in helping out as a volunteer, please reach out to me at yongwoods@icpc.global.
- Join the training sessions through **ICPC Training Warriors** (<https://discord.gg/mAUGf3Zxx8>).

1:1 Meeting Opportunity

- If you would like to meet in 1:1, please sign up using:
<https://calendly.com/yongwhan/one-on-one>.
- I'd love to help you landing your dream job!

Contact Information

- **Email:** yongwhan@yongwhan.io
- **Personal Website:** <https://www.yongwhan.io/>
- **LinkedIn Profile:** <https://www.linkedin.com/in/yongwhan/>
 - Feel free to send me a connection request!
 - Always happy to make connections with promising students!