<https://huntercuny2x.github.io/challenges>

<https://github.com/gibsjose/cpp-cheat-sheet/blob/master/Data%20Structures%20and%20Algorithms.md>

ds cheat sheet

<https://careers.google.com/how-we-hire/> review tops

<https://careers.google.com/stories/applying-to-google/> google tips

To Do:

Youtube computer science

Daily coding

coding interview book ml book

Apply / Resume

Projects

Main Page in google doc

Machine learning book

Review content CSCI 150

Review calc

requires Weka 3-8-3 <http://www.cs.waikato.ac.nz/ml/weka/index.html>  install it

*everyone*has to get IRB

Probability: distributions, densities, marginalization

Basic statistics: moments, typical distributions, regression

Algorithms: dynamic programming, basic data structures, complexity

Ability to deal with abstract mathematical concepts

**MAIN TIPS: REMEMBER EDGE CASES AND TIME MANAGEMENT**

**Interview prep:**

**Leet ode Gmail starred free online assessment interview etc.**

interview questions on Glassdoor. Check out Mock Interviews or Pramp.

<https://interviewing.io/> free online interview

<https://www.pramp.com/#/>

Data Structures + CS Concepts to review:

Recourses:

1. USING MY CODE SCHOOL youtube
2. articles on all ds [**https://hackmd.io/@nesquena/HJ9YQDE2b?type=view**](https://hackmd.io/@nesquena/HJ9YQDE2b?type=view)
3. **Strings manipulation important,** KMP, Z-Algorithm, etc)
4. **Arrays + Vectors**
5. **Linked Listss**
6. **Double linked list**
7. **HashMaps, HashSets,**
8. **Stacks + Queues (seem to be less frequently asked)**
9. **Trees (specifically binary search trees and binary trees** MST) but also probably rare
10. **Graphs (Dijsktra and flows are rarely asked) topological**
11. **sets, maps, unordered set/map, vector, sort stl**
12. **Sorting and searching (mergesort or quicksort) insertion-sort or radix-sort heapsort Bucket Sort, Selection sort**
13. **Binary Search BFS, DFS**
14. **Recursion backtracking**
15. **Dynamic Programming and memeotization on trees as well medium level problems**
16. **Greedy Algorithms**
17. **Divide and Conquer**
18. **Algorithmic concepts:**
    1. **Matching Parenthesis problem**
    2. **Variables/Pointers manipulation**
    3. **reverse linked list (duplicates , removing duplicates)**
    4. **sorting fundamentals (quicksort, mergesort,bubblesort techniques , runtime of a sort,time space complexity)**
    5. **custom data structures (object oriented programming)**
19. **Priority Queues/Heaps (also seems rarer but I got asked a question about it)**
20. **Problems with matricies/2d arrays or vectors (the question I got related to the priority queue also required that you were comfortable with doing something within in a 2d vector)**
21. Bit Manipulation
22. Segment Tree
23. Tries,
24. Math Concepts like Prime Seive - Not that much important
25. Bitmask DP - sometimes asked in interviews\
26. Binomial heap, finonacci heap, skip list, red-lack tree, tries, ternaray search, segment tree, splay tree
27. Competitive Programming Talks with ICPC World finalists ► [https://www.youtube.com/playlist?list...](https://www.youtube.com/playlist?list=PLfBJlB6T2eOup9gVZLAMjEV50YPKcPXuO)
28. How to use Codeforces for Improving ► [https://www.youtube.com/watch?v=X-2OU...](https://www.youtube.com/watch?v=X-2OUqnUH6U&list=PLfBJlB6T2eOuDDm9xscqMZR3nnLP5FiyN)
29. Math Problems with Interesting Analysis ► [https://www.youtube.com/playlist?list...](https://www.youtube.com/playlist?list=PLfBJlB6T2eOthkt1Lkt839s8lcfcbQzJr)
30. Dynamic Programming: Zero to Hero ► [https://www.youtube.com/playlist?list...](https://www.youtube.com/playlist?list=PLfBJlB6T2eOtMXgK3FLUTawHjzpIEySHF)
31. Dynamic Programming on Trees ► [https://www.youtube.com/playlist?list...](https://www.youtube.com/playlist?list=PLfBJlB6T2eOsET4tlfcLs7oXR7kCyt1xc)
32. Graph Theory for Beginners ► [https://www.youtube.com/playlist?list...](https://www.youtube.com/playlist?list=PLfBJlB6T2eOu3dTPKzvAf2axlmQUXGY91)

After completing ds and algo:

1. finish 2 sudo placement -
   1. <https://practice.geeksforgeeks.org/batch/Must%20Do-Interview%20Preparation>
   2. <https://practice.geeksforgeeks.org/batch/Sudo%20Placement%202019/>
2. Daily Coding Problem
3. Haccenak interivew prepation kit
4. [http://www.ardendertatp.com/2012/01/09/programming-interview-questions/](http://www.ardendertat.com/2012/01/09/programming-interview-questions/)

questions

1. [**https://docs.google.com/spreadsheets/d/1x0RErIFtrZbZriM5AJ3ySkSp\_sVK\_2fnSSexFSXXFA4/edit#gid=0**](https://docs.google.com/spreadsheets/d/1x0RErIFtrZbZriM5AJ3ySkSp_sVK_2fnSSexFSXXFA4/edit#gid=0) **tech road map another daily question**
2. <https://techdevguide.withgoogle.com/> grow technical skills with google
3. <https://codeforces.com/problemset?order=BY_SOLVED_DESC> spreadsheet
4. <https://code.google.com/codejam/past-contests>
5. <https://hackmd.io/s/rkg8GyDiQ> codepath interview preparation <https://hackmd.io/@nesquena/rkg8GyDiQ?type=view>
6. <https://codezen.codingninjas.in/practice/123652/4611/interview-shuriken-19:-maximum-subarray-sum> coding practice questions
7. <https://www.interviewcake.com/question/java/linked-list-cycles> intervia ccake all company questions

**Project:**

**Livestream github** <https://mail.google.com/mail/u/0/?tab=rm&ogbl#starred/FMfcgxwChmWDNBkvWfwJdFGlNTXzPCXt>

1. <https://www.freecodecamp.org/news/code-your-own-pokemon-game/> (pokemon game)
2. <https://www.freecodecamp.org/n/t3tR1spY6> Tetris game using Python and Pygam

<https://www.freecodecamp.org/news/python-online-multiplayer-game-development-tutorial/> python multiplayer game

1. whatsapp clone -<https://www.freecodecamp.org/news/native-android-app-tutorial-whatsapp-clone/>
2. Website creation -<https://www.freecodecamp.org/news/html-and-css-course/>
3. <https://www.freecodecamp.org/news/python-connect-four-artificial-intelligence/> create connect 4 USING AI
4. Snake game in YouTube
5. Stopwatch android app
6. <https://www.codecademy.com/paths/web-development/tracks/learn-html-web-dev-path/modules/introduction-to-web-development/videos/introduction-to-web-development> website
7. Django – web dev <https://www.youtube.com/watch?v=UyQn0BhVqNU&list=PLVAVnrCH1BlFuxZARkBbN8KXSjxPgl7Ml>
8. Data science -<https://handbook-for-cuny-hunter-cs-students.webnode.com/database-tutorial/>
9. Machine learning data science <https://mail.google.com/mail/u/0/#starred/FMfcgxwChcqWNLGldNpVwCkdWrWSSJvV> livestream data science linear algebra

Tips:

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