

LeetCode

A project dedicated to DS&A

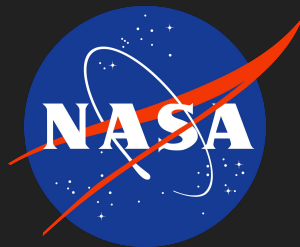
Agenda

1. Our Experiences
2. Resumes
3. Interviews
4. Internships

Our Experiences

Andrew Fennell

- Senior graduating in December 2022
- Interned at [Dell](#) and [CACI / NASA](#)
- Accepted full-time at [Arm](#)



Patrick Apgar

- Senior graduating Spring 2023
- Interned at IBM and Accenture
- Still looking for jahbs...



Our Experiences

Strategies for the process:

1. Improve your resume
2. Mass apply
 - a. From our experience, interview rate of 5-15%
3. Study for technical interviews
 - a. LeetCode, LeetCode, and courses (tamu and/or online)

Resumes

Why a good resume matters...

- Recruiters look at resumes to decide who they will interview
- Your resume has 10 seconds to make a good impression on a recruiter

Jon Doe jdoe@illinois.edu	
Current Address 123 Green Street Champaign, IL 61820 217-123-4567	Permanent Address 45678 Anystreet Anytown, IL 60001 123-456-7890
OBJECTIVE	To obtain a full-time position that utilizes communication, analytical, and leadership skills in the accounting industry
EDUCATION	University of Illinois at Urbana-Champaign Master of Accounting Science Bachelor of Science in Accountancy Cumulative GPA: 3.4/4.0 May 2012 May 2011
EXPERIENCE	Deloitte, LLP <i>Audit Intern</i> Chicago, IL January 2011 – April 2011 • Tested and audited cash for clients • Prepared benefit plan worksheets • Priced, referenced, and filed audit reports for client portfolios • Researched accounting practices for client's quarterly filing University of Illinois-Accountancy Department <i>Student Assistant</i> Champaign, IL August 2010 – December 2010 • Researched and developed questions for interviews with intra-department professors • Interviewed and established relationships with university professors • Created visual and audio media used in Accountancy 202 lectures University of Illinois Foundation <i>Student Development Representative</i> Champaign, IL June 2009 – September 2010 • Developed and maintained existing alumni relations • Trained new employees on computer system • Updated and maintained alumni information on computer system • Organized and facilitated contact information about university campaigns
LEADERSHIP	Alpha Kappa Psi (Professional Business Fraternity) <i>Mentor/Mentee Chair</i> (Spring 2009) Spring 2008 – Present • Implemented relationships for upperclassmen to mentor underclassmen • Provided social and professional settings to initiate mentoring activities • Organized résumé workshops Pledge Coordinator (Fall 2008) • Organized social events to integrate thirty pledges into the organization • Planned and implemented bi-weekly activities for over 100 members • Acted as liaison between pledge and active members

Resumes

- General Info (name, major, GPA, contact)
 - Work Experience
 - Projects
 - Organizations / Activities
 - Skills
-
- Optionals
 - Relevant Coursework
 - Objective
 - ... many others probably!

**DO NOT MAKE YOUR RESUME
MORE THAN ONE PAGE**

Resume Review

- TAMU has a free review (limited reviews):
<https://careercenter.tamu.edu/Resources/VMock>
- Crafting Your Resume - Pitt CS:
<https://pittcs.wiki/career/resume/>

Interviews

Technical Interviews

- Technical interviews are how companies **evaluate** their candidates' **technical abilities**
- Typically LeetCode questions
- **DS&A** and **Object-Oriented Design** questions
- **Don't worry!** If this sounds scary, that's why we are here right now!

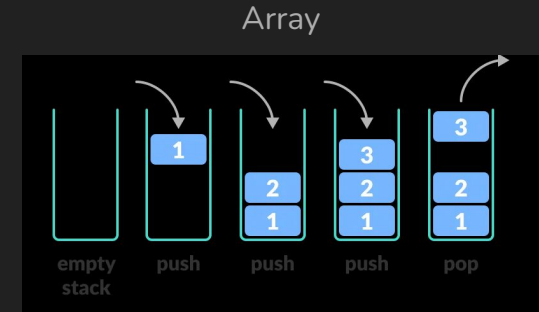


Data Structures

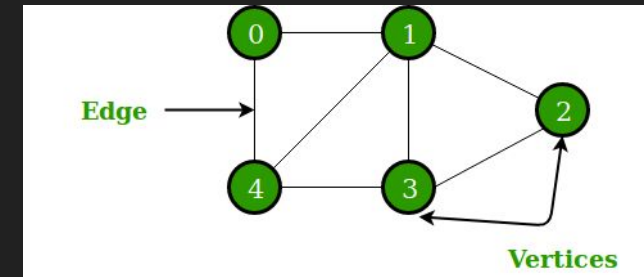
GeeksForGeeks: “A *data structure* is a storage that is used to store and organize data. It is a way of arranging data on a computer so that it can be accessed and updated efficiently.”

- A **represent** data
- A way to **efficiently** store and retrieve data

Memory Location									
200	201	202	203	204	205	206	▪	▪	▪
U	B	F	D	A	E	C	▪	▪	▪
0	1	2	3	4	5	6	▪	▪	▪
Index									



Stacks



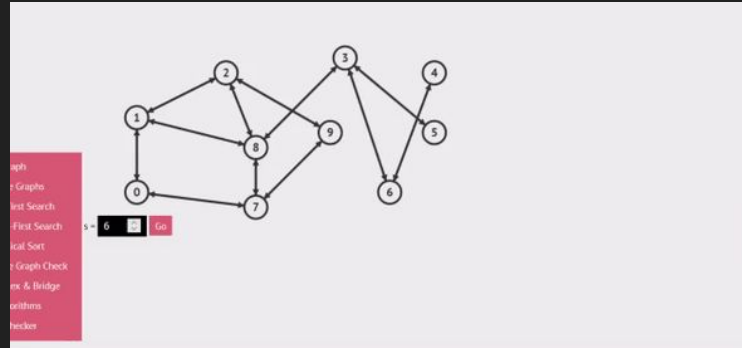
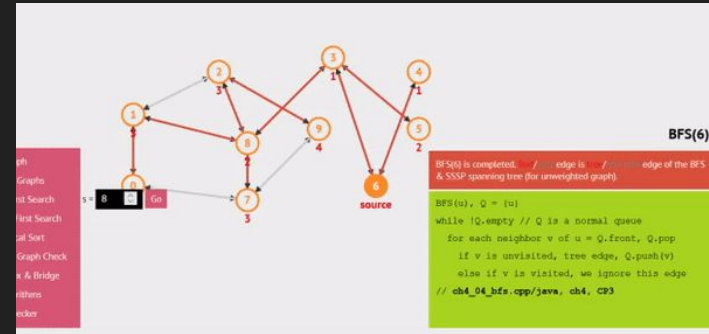
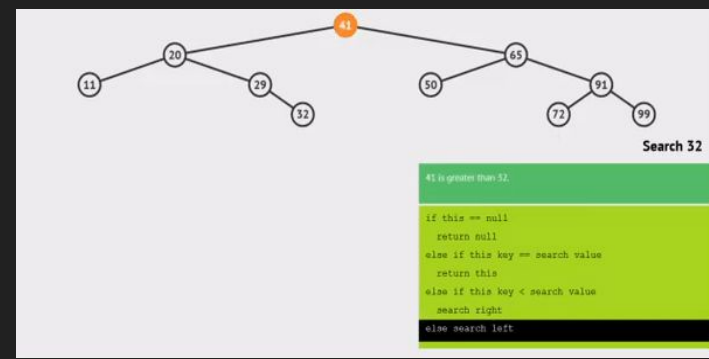
Graphs

Algorithms

GeeksForGeeks: “A set of rules to be followed in calculations or other problem-solving operations.”

OR “A procedure for solving a mathematical problem in a finite number of steps that frequently by recursive operations.”

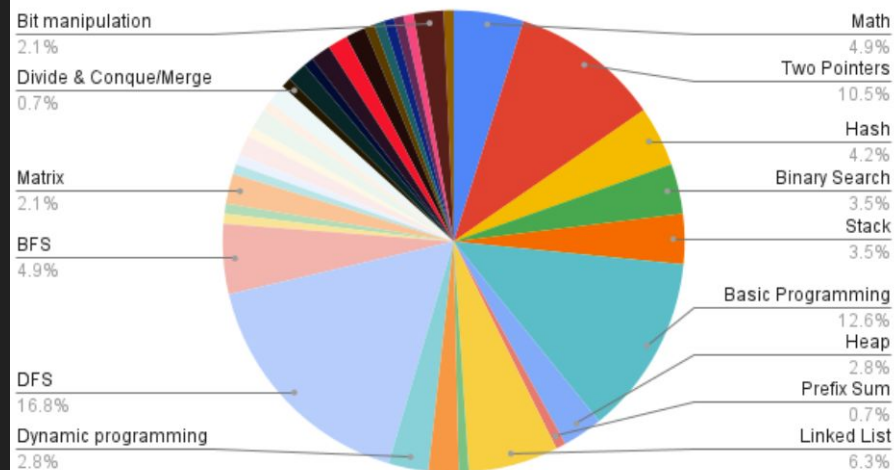
- A **set of steps** that lead to a **solution**
- **Efficiency** is key
- Many types of algorithms



Focus on Topics that Matter

- Some Leetcode questions are more valuable than others for interviews
- Practice topics that are seen in technical interviews most often

Top problems overall



What to study?

- Prioritize studying topics that have:
 - a medium-high ROI
 - a low-medium difficulty
- Good Examples:
 - Tree BFS/DFS
 - Binary Search
 - Linked Lists
 - Hashmaps

Topic	Difficulty to learn	Return of Investment
Two Pointers	Medium	High
Tree BFS	Low	High
Graph BFS	Medium	High
Tree DFS	Medium	High
Graph DFS	Medium	Medium
Combinatorial DFS	Medium	Medium
Heap	Medium	Medium
Binary Search	Medium	Medium
Divide and Conquer	High	Low
Linked List	Low	High
Hash	Medium	High
Dynamic Programming	High	Low
Trie	Medium	Medium
Union Find	Medium	Low
Greedy	High	Low

Technical Interview Resources

- Leetcode
- CSCE 221 at TAMU
- Youtube
- NeetCode: neetcode.io/practice
- Paid resources:
 - Cracking the Coding Interview
 - Algo.Monster
- Mock Interviewing: <https://interviewing.io/>

Internships

Internships

- Internships give you the opportunity to work in industry
 - But they also give you the chance to understand whether or not this career is right for you
- There are a lot of areas of work that your major is applicable to...
- You want to pick an area that you enjoy.
- As you probably know, internships are extremely competitive, so how do you stand out from the crowd?

Internship Resources

- Career Fairs
- <https://github.com/pittcsc/Summer2023-Internships>
- Job Boards
 - Indeed
 - LinkedIn
 - Etc
- Freshman/Sophomore Opportunities:
<https://pittcs.wiki/career/freshman-sophomore-opportunities/>

General Advice

Advice - Patrick's Perspective

- Projects are your lifesaver, and will be even after you get into full-time
- No matter what courses I took, or where I worked...
 - At the end of every successful interview, we were talking about my projects
 - That's what helped seal the offer
- Start small, and grow from there
 - You don't have to work at the big tech companies or Unicorns like Google and Uber
 - Experience is experience no matter where you go
 - Instead, apply to small companies. Startups, consulting firms, etc.
- Network
 - Always make connections because they will save you too!

Advice - Andrew's Perspective

- Projects help you a TON in behavioral interviews
 - Experience working with a team is what companies want to hear about!
 - Working through tough issues **with people** is how you impress recruiters.
- Find what study habits work for you
 - Some people learn through watching, doing, reading, etc...
- 'FAANG' seems like the dream, but there are **great** opportunities elsewhere
- **MASS APPLY.**
 - Not every interview will go great.
 - Apply everywhere and make it a numbers game!
- **Don't stress out.**
 - It is easy to feel like you are behind, but take it at your own pace.
 - **Imposter syndrome** is real! Don't fall for it!