



## Find Your First Tech Job

A Guide for finding your first tech job

By: Matthew MacRae-Bovell





## I'm Matthew

- CS @ Carleton, Started 2018
- Government, Startups, Freelance, Big Tech, & More
- 4 Years of Experience Before Graduation





COMPUTER OCIETY	Year	Fall	Winter	Summer	Results
	2018 - 2019	5 Courses	5 Courses	0 Courses	10 / 40 Courses 4 Months Experience
	2019 - 2020	5 Courses	5 Courses	0 Courses	20 / 40 Courses 16 Months Experience
	2020 - 2021	1 Course	2 Courses	2 Courses	25 / 40 Courses 2+ Years Experience
	2021 - 2022	3 Courses	2 Courses	2 Courses	33 / 40 Courses 3+ Years Experience
	2022 - 2023	2 Courses	1 Course	0 Courses	36 / 40 Courses 4+ Years Experience
	2023 - 2024	1 Course	(current)		Should have graduated here

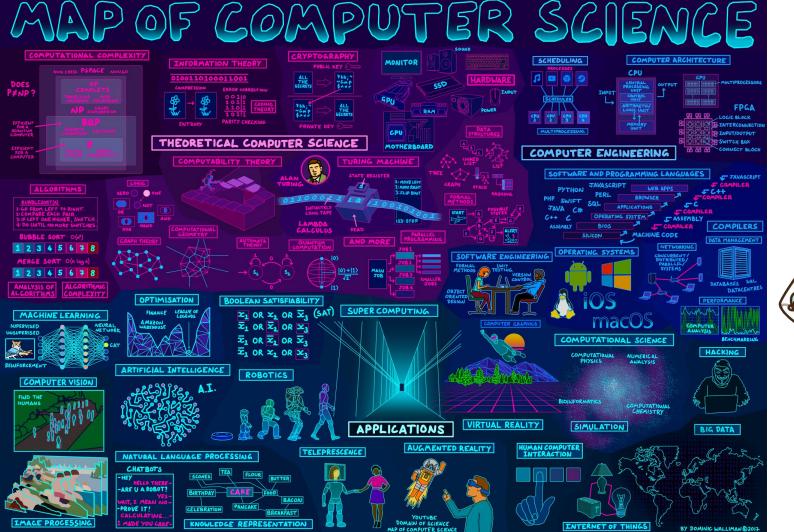
\* Note: Years of experience is a bad metric, what you "actual" worked on is what matters



#### What Is This Presentation?

## Everything You Need For Your First Tech Job Search









### "No one going into university really knows what they're doing - and that's ok."

Ultimately, you're going to university to some day get a job - but it's hard to know what the workplace is truly like.

It is your responsibility to do your best to figure out what job will bring you the most fulfillment and happiness.





#### "What is an Internship and why do they matter?"

- Gives you a better idea of what you want to do when you graduate
- Exposure to the difference between industry, school, and academia
- Exposure to different skills, domains, and development ecosystems
- You can "test" a workplace before you commit to several years
- Start gaining "years of experience"
- They act as an extended Interview





#### Am I really qualified yet to work?



Don't sell yourself short.





## "Ok so ... how do I land my first tech job?"





#### It's All About Funnels

You don't have to do all these things, but the more things you do will

increase your chance of finding a job.





Agenda

- Workplaces
- Reading Postings
- Finding Postings
- Networking
- Resumes
- Interviews





# Workplaces

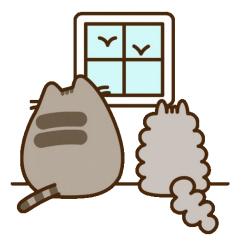




## **Core Factors Of Judging a Job**

- Organization Level
  Team Level
  - Size
  - Values
  - Mission / Market

- The Project
- Structure
- The People



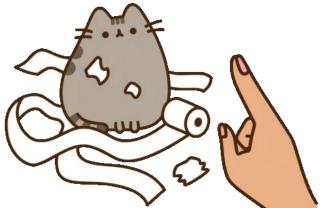
What you can see from the outside...

What won't know till your first day...



## The "Dream Company" Fallacy

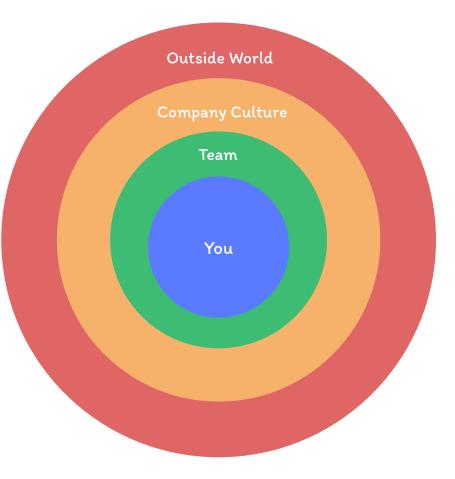
Despite some companies seeming like great places to work, it's ultimately the people you work with that will have the most impact on your experience.





#### "Onion of Influence"







## **Organization Size**

- How "specific a job is"
  - Bigger  $\rightarrow$  want more niche people
  - Smaller  $\rightarrow$  want people with more breadth
- Bureaucracy & Flexibility
  - Bigger  $\rightarrow$  more bureaucracy
  - Smaller  $\rightarrow$  less bureaucracy
- More vs less job security
  - Bigger  $\rightarrow$  more security
  - Smaller  $\rightarrow$  less security





## **Organization Type**

- Technical vs Non Technical Institution
  - Technical = better developer experience
- Government vs Private Companies
  - Benefits + Job Security
  - Gov does not want to maintain "tools"
- B2B vs B2C
  - Depends on the market
- Product Focus?





## Your Team

- The Project / Work
  - Contract work vs long spanning projects
- Team Structure
  - Horizontal vs Vertical Teams
  - How involved are UX, business, client, etc.
- Team Dynamics
  - Rituals & ritual Frequency
  - Who writes acceptance criteria?





## In Reality, Every Job is Unique

Despite all these factors, these are only really generalizations and every organization varies in how much they do or don't align with these notions.





# Reading Postings





## Internship vs "Co-op"

"Must be in an accredited Canadian cooperative education program".

Usually indicates you need to be in a co-op program so that institution can receive a **tax break**.

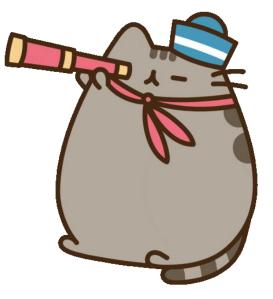
Apply **anyways**, just know that it may not work out.





## Key Posting "Components"

- **Duration -** Term Length, Full-time, etc
- Position Title
- Responsibilities
- Location
- **Salary\* -** Transparency is a good sign







#### 4 months

Can be very short, you might not get to experience as much You can often ask to extend

I've **personally** found my learning peaks around 4 months

#### 8-16 months



More likely to be given ownership

If you dislike the work or environment, you're stuck Will appear more **significant** after you graduate





#### Software Developer

• Generic, assumes you'll be doing some form of "development"

#### Backend

- "Business Logic", not view related
- Frontend
  - View related
- Fullstack
  - Backend + Frontend



- Web Designer / Web Master / Web Developer... when people add Web to the title
  - Gives me the vibe I'm about to basically just do generic HTML, CSS and JS



#### "Data Scientist"

- Doing Math, finding trends in data, may involved developing tooling related to touching that data
- Al and ML is a subset, but usually applied machine learning is a separate title

#### • Business Analyst / IT Analyst

• "Analyses" out what the business needs, writes up specifications for the developers, writes metric reports, title is honestly vague whether it will have development

#### Quality Assurance / Automation / Testing

• Manually testing or writing automation tests for other people's code





#### "DevOps"

- DevOps = Developer Operations, CI / CD
- "IT for Developers"
- Production / Infrastructure / Site-Reliability / Cloud Developer
  - "Keeps the application running"
  - Usually concerned with system infrastructure, scalability, deployment, etc.

#### • Data Engineering

- Use or build tools for organizing and or analyzing data
- "Software Development for Data People"





#### Product Manager

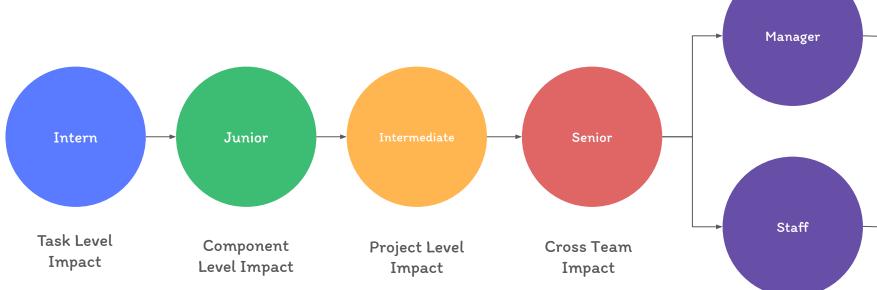
• Determine priority of development tasks, usually every team has one

#### • Product Designer, UI / UX

• Mockups, wireframes, prototypes of the desires interfaces, not necessarily implementing them with code









Project has many Components, Component has many Tasks



## Not Sure What Skills a Company Looks For?

#### Check their full-time postings.

You'll likely use the same tech as full-time employees.





# Finding Postings





## When To Search for Internships

#### Summer

- Summer is the **most** competitive term (few people are in school)
- August March

#### Fall

- The **least** competitive term (everyone's going back to school)
- May July

#### Winter

- More competitive than Fall
- September November

\*\*\* In reality you kind of never stop looking...





## Where to Search - Surface Level Options











#### Title Permutations + location

- Software Developer Intern
- **Developer Intern**
- Software Intern
- Software Developer co-op
- Developer co-op
- Software co-op





## **Dean's Summer Research Internships**

- Work with professors to conduct research
- Requires a CGPA of 10
- Requires you to inquire with profs on your own



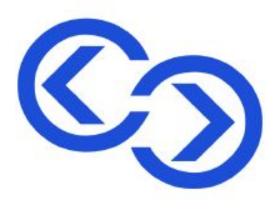


## Federal Student Work Experience Program

- Adds you to a job bank for different departments within the Government of Canada
- Lets you list your field interests







<u>https://www.cscareers.dev/</u> <u>https://discord.com/invite/cscareers</u>





## Carleton Co-op

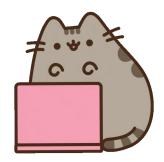




# **Co-op Jobs Portal**

### To apply you include

- Resume
- Cover Letter
- Grades Page



Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106472	Junior Software Developer	2KEYS Corporation	Development
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106524	Support Technician, Infrastructu	Agriculture and Agri-Food Canada	IT Client Service
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106748	IT Service Desk Analyst	Agriculture and Agri-Food Canada	IT Client Service
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106456	Software Developer (Co-op plac	Ajile Light Industries	Research & Dev
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106806	Hardware Design Engineering St	Arkalumen Inc.	Engineering
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106807	Software Design Engineering St	Arkalumen Inc.	Engineering
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106659	Software Development Student,	Assent Compliance Inc.	Human Resourc
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106098	Software Developer Co-Op	Barracuda Networks Canada Ltd.	Human Resourc
Shortlist	Apply	Deadline in 2 day(s)	2021 - Summer	106581	Trial Manager	Bell Canada	Network
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	107046	IPTV Applications Architect (12	Bell Canada	Video Technolog
Shortlist	Apply	NEW Deadline in 14 day(s)	2021 - Summer	106987	Bell 2021 Student Opportunities	Bell	Talent Acquisitio
			2021 - Summer	106595	Full Stack Developer Student	BlackBerry	Human Resourc



## **Pros and Cons**

#### • Pros

- Easier Job searching
- Access to co-op only postings

#### Cons

- You can only turn down one job
- You can't turn down interviews
- Course is not tailored
- Term reports 10+ page report
- Fees





### Talk to Your Co-op Student Advisors

- Make sure to ask your Co-op student advisors lots of questions
- Co-op is different from just applying for another term of courses so make sure you well set up for it
- Also contact them for fishy things





#### Elliott Godin

Co-op Student Advisor- BEng (Comms, CompSys, Software)

#### **Full Profile**



Suzanne Knight

Co-op Student Advisor - BCS Full Profile



### An Example... Health Insurance In Co-op

- If your co-op is in the Fall term, your health insurance isn't automatically renewed
- Make sure to apply yourself before the deadline or else you won't be covered

	Coverage from Sept. 1, 2023 – Aug. 31, 2024 (for undergraduate students taking fewer than 4 courses)	Coverage from Jan. 1 – Aug. 31, 2024 (for new Winter Term students only)
Total	\$179.87	\$119.92
Health Plan	\$105.88	\$70.59
Dental Plan	\$73.99	\$49.33

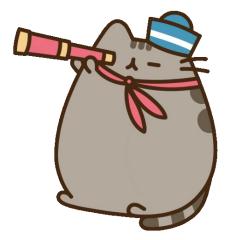




### International Students and Co-op

- Ask Carleton's International Students Service Office for info
- You need a co-op work permit to work and it can take up to 3 months
- Make sure to also apply for SIN







# Networking





### **Career Events**

- Conferences
- Career Fairs
- Meetups
- Hackathons (sponsors)
- Networking Events
- Carleton MySuccess Calendar





#### Carleton Career Fair - January 24th







### For Each...

- What they do
  - Products?
  - In General?
- What they want
  - Skills?
  - Job postings?



- faster and more reliable plan development.
- BlackBerry QNX
  - QNX is the operating system
  - Top languages: JavaScript C++ Java C Ruby
- Trend Micro Incorporated
  - Trend Micro Inc. is a Japanese multinational cyber security and defense company founded in Los Angeles, California
  - Top languages: Python JavaScript C++ Java Go
- Vectorface
  - We are currently one of the forerunners in the social gaming market and we are working with teams from coast to coast to develop new games and experiences for social gamers around the world.
  - Top languages: PHP JavaScript CSS Redis (1 github project), MySQL (seen on github)
- Intouch Insight (are they a parent company??)
  - Top languages: PHP Ruby JavaScript Java
  - Check : Specialize in Mobile Form Software
  - LiaCX: Customer Experience Management Software
- Accenture
  - Top languages: Shell Groovy JavaScript Java Ruby
  - Do stuff with oracle cloud services
- Scalien Group
  - Software for avionics testing Avionics software
    Work with drones and such
- Qlik
  - Qlik is a software company based in Radnor, Pennsylvania
  - · Top languages: JavaScript Shell Go C++ Java
  - Qlik Sense: The most powerful and complete multi-cloud solution for modern BI
  - Qlik Sense Enterprise: enables the full spectrum of analytics use cases on a modern multi-cloud platform, delivering flexibility, governance and scalability for your organization.
  - Qlik Sense Cloud: Enables your group or team to get analytics up and running fast. With everything ready to go, you can quickly bring your data together and collaborate in a secure, hosted environment.
  - Qlik Analytics Platform: embedded and custom analytics
- Cisco Systems
  - Top Languages: C Ruby C++ Go JavaScript
  - Networking company
- Veem
  - Veem is a global payments platform, using SWIFT, treasury and cryptocurrency, typically bitcoin.
- Kanata North Business Association
  - Seems to be a collective of businesses
- Magnet Forensics
  - ACQUISITION TOOL FOR SMARTPHONES AND COMPUTERS
- Stega Networks
  - providing innovative IT solutions designed to improve the productivity and performance of business units across your organization.
  - Web development?
- Gemalto
  - Gemalto is an international digital security company providing software applications, secure personal devices such as smart cards and tokens, and managed services.
  - o Ton Languages: Go Java Python C# Smarty

\*\* Real example from Matthew's first vear



## Helpful Career Fair Advice



- You are going to the event to "impress" not to "learn".
  - You should already know the kinds of positions they're hiring for
  - You're going to shake the recruiters hand
- **Do not** ask the company **"what they do"**... you should already know
- **Do not** say "I'm **first year** standing"
  - Understand you are competing with upper-year students
- Take **interest** in working at their company
  - Show you actually care by saying something like "I've heard  $\{x\}$  is the leader in  $\{y\}$ "



### Learn to Sell Yourself

Sell yourself one way to the recruiter and another way to the developer. The recruiter is looking to tick off boxes - say you know those skills.

"Hi my name is {name} and I have a background in {x,y,z}. I've heard great things about {something that show you care} at {company}, and was interested in applying and learning about your upcoming student positions".







# LinkedIn





## Why LinkedIn Matters

#### • Recruiters / Interviewers will look

- o After career events
- When they see your resume

#### • You can look them up...

- The modern version of handing your resume in by hand
- Less effort than an email / cover letter
  / follow up
- Your activity "raises you" in recruiter search results



Matthew MacRae-Bovell • 11:19 PM

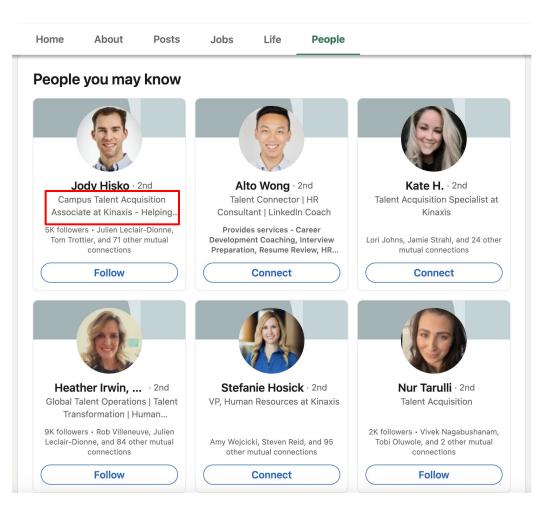
Hi \_\_\_\_! My name is Matthew and I'm a computer science student who would love to intern with \_\_\_\_\_. I'm currently searching for a Software Developer co-op for the upcoming summer and fall terms. I'm experienced with Ruby on Rails, React and Java. I would love to chat if you're free!





### Find and connect with recruiters, devs, and managers!









, CHRP (She/Her) · 1st

#### Recruitment | Co-ops & Internships | Product Development

SEP 25, 2019



Matthew MacRae-Bovell (He/Him) • 3:00 PM

Hello! my name is Matthew MacRae-Bovell and I'm a 2nd-year Carleton computer science student. I just saw your post about Kinaxis attending the Waterloo career fair, and was wondering if Kinaxis was planning to come to Carleton and when Kinaxis normally starts hiring students for the summer.



CHRP (She/Her) • 9:04 PM

Hi Matthew. We are attending Day 1 of Carleton University's Fall Career Fair on Wednesday October 16th from 10am – 3pm in Alumni Hall – Athletics Centre. We start posting to Carleton in January 2020 for summer coops. See you in a couple of weeks!

## Reach out after or even before!





# Another Example...



Matthew MacRae-Bovell (He/Him) · 10:52 AM

a! I just saw your post regarding a role working on Zapier's Runner team and I'm very interested! I currently work on Shopify's automation platform "Shopify Flow" where I've worked on both our core engine and developer platform. Would love to connect and learn more about the role!



(He/Him) • 10: 💐 👍 👎 😊 😞 🤩

Hey Matthew, I wanted to acknowledge your impressive skill set and express my appreciation for your interest in our team at Zapier. Allow me to provide you with a brief overview of the Runner team.

Our team is responsible for one of the core systems at Zapier and consists of 5 engineers, 1 product manager, and 1 engineering manager in the AMER timezone (ET, CT, and PT). We're looking for a new team member to f Latest message osition, with an ideal start date in May 2023. The team is looking for

Write a message...

🔜 🖉 GIF

 $\sim$ 

...

Send •••



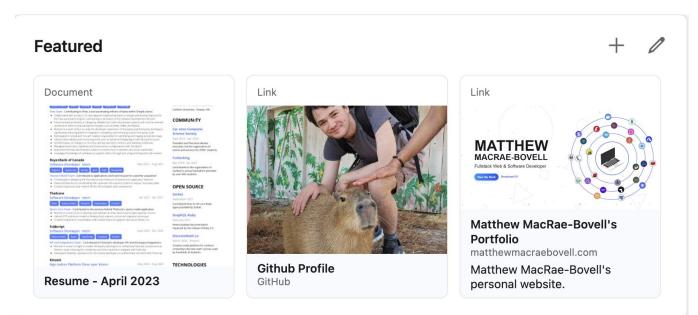


# **Profile Tips**





## Add "Featured" Links





# Add "links" and skills

#### (Make it look full)





#### Software Engineer II

Jobber

May 2023 - Present · 6 mos Ottawa, Ontario, Canada · Hybrid





...

#### Software Developer

Shopify Sep 2021 - Apr 2023 · 1 yr 8 mos Ottawa, Ontario, Canada

Working as a member of the Flow Team, enabling the automation of millions of merchant tasks each day.

...see m

...see m

 $\textbf{Skills:} \ \textit{Microservices} \cdot \textit{React.js} \cdot \textit{Ruby on Rails} \cdot \textit{Kafka} \cdot \textit{Golang} \cdot \textit{Datadog} \cdot \textit{Splunk} \cdot \textit{GraphQL}$ 





#### Software Developer

RBC · Internship May 2021 - Aug 2021 · 4 mos Toronto, Ontario, Canada

Worked as a member of the "Choose a Bank" journey, a development group focused on customer acquisition....

 $\textbf{Skills:} Microservices \cdot Angular \cdot Spring \ Framework \cdot TypeScript \cdot RxJS \cdot NgRx \cdot Java$ 



**RBC OMNI** 





rocketreach.co



# Resumes





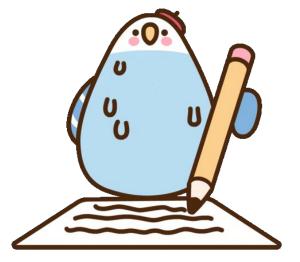
## "Objective" Resume Advice

#### • SAR = Situation. Action. Result.

• What did you do? What skills did you use? What came of it?

#### • Make sure your resume scans and prints

- Two Columns Might not parse as well as single column
- Some resume parsers try to read horizontally
- Grammar + Spelling Check Just do it...







## More Resume Advice

#### "Just look at what everyone else is doing"

- Find the resume of a student who got into a company you want to work for, you can infer what factors helped them land the job
- r/csMajors ... (or equivalent)
  - You can find a few hundred or so resumes to scan on the weekly resume roast threads

#### • Don't take advice from just one person

• Taking raw resume advice (especially from other students) is hard to filter





## Even More Resume Advice

- You can't please everyone: keep it general for general applying, tailor if you care more
- Good formatting, spacing, etc. shows you pay attention to detail
- Keep multiple resumes tailored to different applications
- Don't oversaturate your skills probably doesn't apply if you're 1st or 2nd year
- Maximize space ~ Broken lines look gross and waste space ... reword your points until they fit



### **Resume Office Hours**

Get 1-on-1 feedback from accomplished computer science students

January 8th 2:00 - 5:30 PM EST, HP 4125

January 9th 2:30 - 6:00 PM EST, HP 4125

January 10th 2:00 - 5:30 PM EST, HP 4125





### "What do I put on my resume if I don't have anything?"

- **Projects** great way to show experience with technologies without having paid experience
  - Could be an app, game, website, or anything you've built that is relevant to the job!
  - Don't have any projects? Word your school work into projects
    - Yes, this is dangerous because recruiters are going to see the same projects
  - Don't have any projects from school? Copy a Youtube tutorial / project (self learning)
- Add extra-curriculars
- Add Interests
- Have really pretty spacing. Make it minimalistic.





### **TLDR: Personal Projects**

Learn everything you need to know in relation to personal projects!





### **Contribute to CCSS Projects**

All of January, we'll be adding new Github Issues to our projects.

#### Work Periods:

Work asynchronously, or join us in person to work together

**January 19th** 3:00 - 5:30 PM EST, HP 5345

**January 26th** 3:00 - 5:30 PM EST, HP 5345





# Interviews





### • OA - Online Assessment

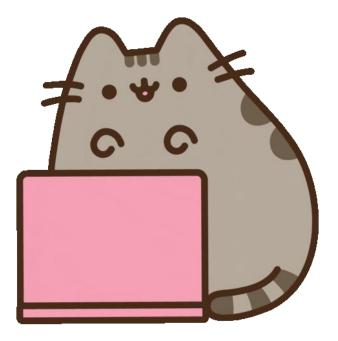
- Take home project challenge
- Time-based code challenge

### • Behavioral "HR" Interview

- Communications skills
- Culture Fit

### Technical Interview

- Algorithms
- 00P Questions
- System Design





### What is the Interviewer looking for? (Depends)

- If your someone they'd want to work with
- If you actually care about the work
- If you have a strong desire to learn
- How you communicate your ideas
- Some level of technical skill
- "Well rounded people"





# Check Reddit and Glassdoor for previous interview experiences.





## **Obligatory LeetCode Slide**



- You can't just do "8 hours of LeetCode"
- When I used to care about LeetCode, I did 1 problem a day and would attempt the problem again 1 week later to make sure I still understood it. Sort by difficulty, acceptance.
- I find LeetCode isn't that crucial for jobs at the local level





### **A Guide to Tech Interviews**

Learn everything you need succeed with your upcoming interviews

Jan 17th, 2:30 - 3:30 PM PM, Herzberg Building (HP 5345)





### Before you Accept

- Don't feel pressured to accept a job offer immediately over the phone, take some time to think it over
- Know what you're going to be doing (at a surface level)





# Thank You!

**Questions?** 







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