



Finding Internships

Saturday, January 16th | 12 - 1 PM EST

Finding Internships

By Matthew MacRae-Bovell



HELLO!

I'm Matthew :)



▶ Before we start...

- ▶ All presenters have a **personal bias** from their own experiences
- ▶ Don't feel **forced** to do what you're not comfortable with
- ▶ Take advantage of **student exclusive** opportunities
- ▶ Everyone has **different life goals**

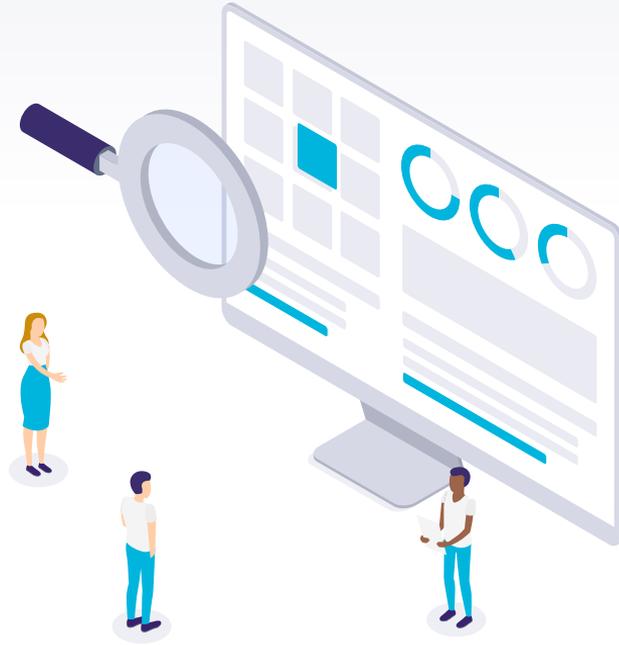


The Benefits of Internships

- ▶ Allow you to gain relevant experience and prepare you for full-time positions
- ▶ Help you discover what your interests within computer science are
- ▶ Test different work environments, work styles, teams, etc. without committing to full-time employment
- ▶ Learn what you won't learn in school



Getting Started



▶ Finding Your Interests

Tips for if you aren't sure what part of CompSci interests you:

- ▶ Connect your other interests to CompSci
 - ▶ Examples: Music Software Development, Chemistry lab Simulator
- ▶ Look into the technical requirements of positions similar to work you might want to try
- ▶ Look into the technical requirements of positions at a company you may want to work for
- ▶ Experiment with side projects
 - ▶ Will be discussed later

Terms

- ▶ Usually follow the three term schedule (Fall, Winter, Summer)
- ▶ Terms vary in length from 4 months - 16 months+
 - ▶ **4 months**
 - ▶ Can be very short, you might not get to experience as much
 - ▶ Many companies will bring you on for 4 months at first, but extend you later
 - ▶ I've personally found my learning peaks around 4 months **(VERY SUBJECTIVE)**
 - ▶ **8-16 months**
 - ▶ More likely to be given ownership, but if you dislike the work or environment you're stuck
- ▶ In CO-OP you're required to do a total of 16 months - can be divided up
- ▶ Some companies in the US do quarterly terms

When To Search

▶ Summer

- ▶ Summer is the **most** competitive term (few people are in school)
- ▶ August - April
- ▶ **January is important**

▶ Fall

- ▶ The **least** competitive term (everyone's going back to school)
- ▶ May - August
- ▶ **May is Important**

▶ Winter

- ▶ **More** competitive than Fall
- ▶ August/September - November/December
- ▶ **September is Important**

Job titles are very subjective and vary greatly between organizations...

Job Titles (1/3) (and what they kind of are, but not really)

- ▶ **Software Developer**
 - ▶ Generic, assumes you'll be doing some form of "development"
 - ▶ Could really mean anything
- ▶ **Backend**
 - ▶ Business logic for some kind of web based system
 - ▶ Not aesthetic stuff
- ▶ **Frontend**
 - ▶ View and client logic for some kind of application
- ▶ **Fullstack**
 - ▶ Backend + Frontend, hard to tell what position really is from title
 - ▶ Usually biased to be more frontend, but that's very subjective based on the position
- ▶ **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

Job Titles (2/3) (and what they kind of are, but not really)

- ▶ **“Data Scientist”**

- ▶ Doing Math, finding trends in data, may involved developing tooling related to touching that data
- ▶ Although AI an ML are a part of data science, any position that's actually looking for that stuff changes the title to Machine Learning Engineer or something to seem fancy

- ▶ **Business Analyst / IT Analyst**

- ▶ Figures out what the business needs, writes up specifications for the developers, writes metric reports, title is honestly vague whether it will have development

- ▶ **Devops / Production / Infrastructure / Cloud Developer**

- ▶ Working on a mix of deployment and developer experience tooling + all that funky distributed system cloud stuff
- ▶ Devops = Developer Operations

- ▶ **Quality Assurance / Automation / Testing**

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

Job Titles (3/3) (and what they kind of are, but not really)

- ▶ **Product Manager**

- ▶ Determine priority of development tasks, probably run scrum meetings

- ▶ **Product Designer**

- ▶ Mockups, wireframes, prototypes of the desired interfaces, not necessarily implementing them with code

▶ Workplace Factors (1/2)

As an intern, you want to maximize the learning and growth you will achieve over the course of your term. The following are factors you can judge a workplace by before you apply.

- ▶ **Organization Size**
 - ▶ See next slide...
- ▶ **Organization Type**
 - ▶ Government
 - ▶ Startups
 - ▶ Product Focused Companies
 - ▶ Tech company vs Non tech company
- ▶ **Technology & Learning Opportunities**
- ▶ **Internal Culture**

▶ Workplace Factors (2/2)

▶ Size of Organization

Large

- ▶ More specific roles
- ▶ More bureaucracy
- ▶ Less flexibility
- ▶ More Benefits
- ▶ More Job Security
- ▶ Less Ownership
- ▶ Less Stress? **

Small

- ▶ Less specific roles
- ▶ Less bureaucracy
- ▶ More flexibility
- ▶ Less Benefits
- ▶ Less Job Security
- ▶ More Ownership
- ▶ More Stress? **

Very Subjective based on the company and where they might land on the spectrum

My very Subjective Experiences with different types of Institutions



- ▶ 5-10 Employees
- ▶ Startup
- ▶ Not product focused
- ▶ Lots of Learning
- ▶ Irregular Schedule



- ▶ 2000+ Employees
- ▶ Government
- ▶ Not product focused
- ▶ Non Technical institution



- ▶ 1000+ Employees
- ▶ Publicly Traded
- ▶ Product focused
- ▶ Technical Institution

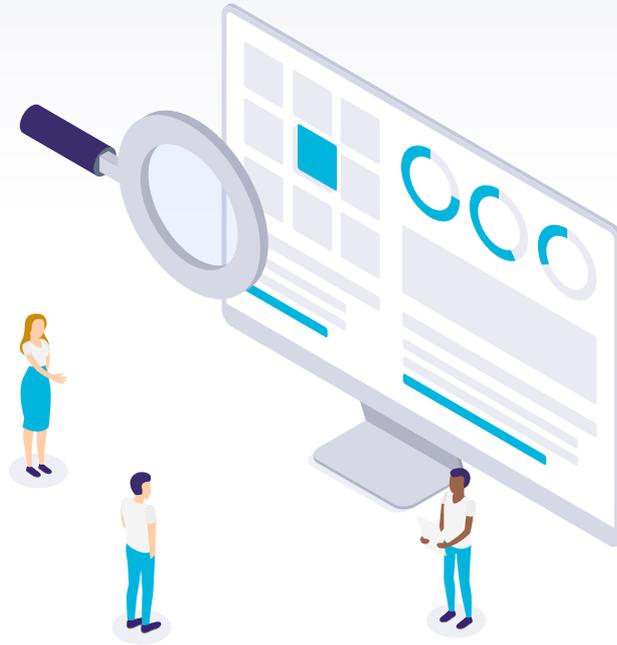


- ▶ 250+ Employees
- ▶ Startup
- ▶ Product focused
- ▶ Noticeable Dev Culture



- ▶ 250+ Employees
- ▶ Publicly Traded
- ▶ Product focused
- ▶ Product Focused Culture

Job Searching



Surface Level Options

- ▶ Online Postings
 - ▶ LinkedIn
 - ▶ Indeed
 - ▶ Google
 - ▶ Company Careers Section
- ▶ Attending Events
 - ▶ Conferences
 - ▶ Hackathons (usually have sponsors)
 - ▶ Networking Events
 - ▶ Check out carleton mysuccess careers calendar



LinkedIn

- ▶ Inquire about Internship opportunities with **“Recruiters”** or **“Talent Acquisition”**



Matthew MacRae-Bovell • 11:19 PM

Hi [redacted] My name is Matthew and I'm a computer science student who would love to intern with [redacted] 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!

- ▶ You can also reach out once a posting is live to inquire about specific posting details.

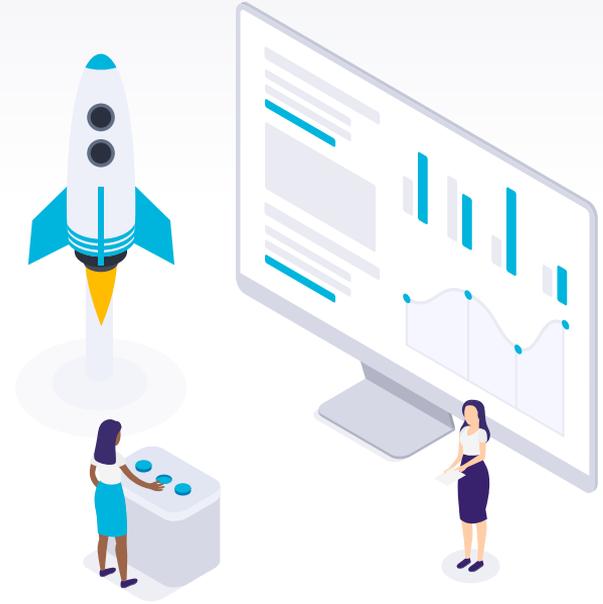




rocketreach.co

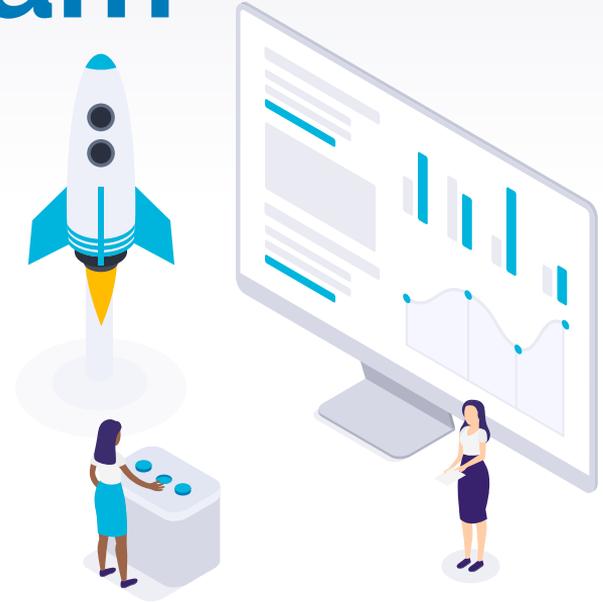
▶ Dean's Summer Research Internships

- ▶ Work with professors to conduct research
- ▶ Requires a **CGPA of 10**
- ▶ Requires you to inquire with profs on your own
- ▶ [Link](#)



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
- ▶ [Link](#)

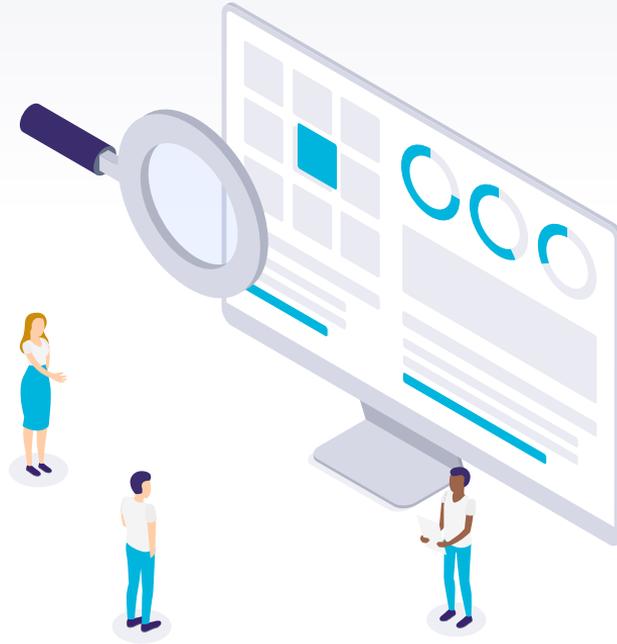




Angellist

angel.co/jobs Has lots of startup jobs

Carleton Co-op



Carleton Co-op

- ▶ **COOP Vs Internships**
 - ▶ Some companies use the term interchangeably
- ▶ **The process**
 - ▶ The course > Job Search > Work term > Report
- ▶ **Fees**

Year	One			Two			Three			Four			Five	
Term	F	W	S	F	W	S	F	W	S	F	W	S	F	W
Pattern	S	S	O	S	S	W	W	S	W	S	W	W/S	S	S

Co-op Costs

Program Costs: [Link](#)

Administrative Fees for Undergraduate Students

There are a total of 4 co-op admin fees which are charged on a predetermined schedule.

The first admin fee is charged when a student registers for COOP1000. Registration in this course indicates that the student is now part of the co-op program and will remain so unless the student requests to withdraw or is removed for missing requirements. Your predetermined admin fee schedule depends on whether you take COOP1000 in the Fall term, or in the Winter term.

.All co-op students are required to pay all admin fees regardless of whether or not:

- co-op position is secured, and/or
- the position is secured through the co-op office or through a student's self-directed search

Program Cost

The fees you pay cover the entire cost of delivering this option to eligible students. The total program fee will vary based upon a student's program and the number of work terms they are required to complete for their designation.

The fees are broken into administrative and work term components. Carleton University is proud to be able to offer to students the opportunity to participate in one of the best co-op programs in Canada while working hard to ensure its fee remains one of the lowest in the province.

Cost of Admin and Work Term Fees for the 2019/20 Academic Year

	Summer 2019	Fall 2019	Winter 2020
Admin Fee	\$405.50	\$405.50	\$405.50
Work Term Fee	\$405.50	\$405.50	\$405.50

▶ Helpful Courses

- ▶ **COMP2402:** Data Structures
 - ▶ Algorithm questions are common
 - ▶ Take it first term 2nd year if you can
- ▶ **COMP 2406:** Fundamental of Web Applications
 - ▶ The majority of the co-op positions are web based
 - ▶ Take it first term 2nd year if you can

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...	Ajlie Light Industries	Research & Deve
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 Resource
Shortlist	Apply	NEW Deadline in 2 day(s)	2021 - Summer	106098	Software Developer Co-Op	Barracuda Networks Canada Ltd.	Human Resource
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 Technology
Shortlist	Apply	NEW Deadline in 14 day(s)	2021 - Summer	106987	Bell 2021 Student Opportunities	Bell	Talent Acquisition
			2021 - Summer	106595	Full Stack Developer Student	BlackBerry	Human Resource

▶ Co-op Pros & Cons

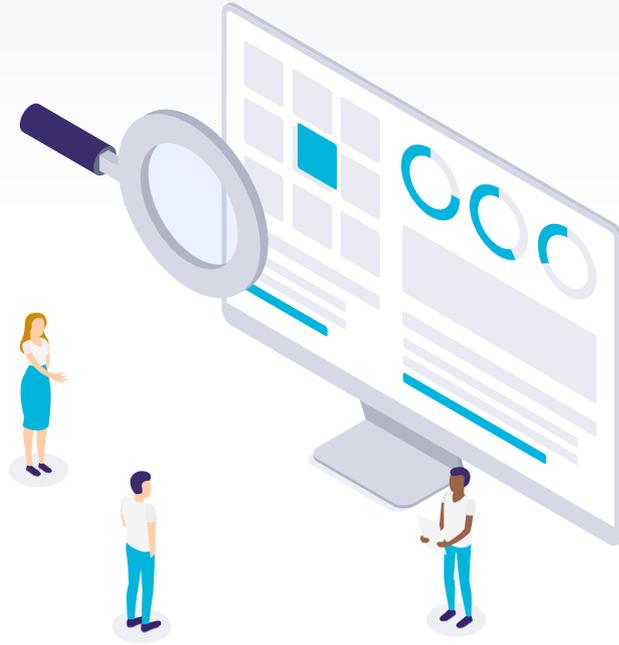
▶ Pros

- ▶ Easy Job searching
- ▶ Saves you time
- ▶ Access to co-op only postings
 - ▶ tax credit

▶ Cons

- ▶ You can only turn down one job
- ▶ You can't turn down interviews, but you can reschedule
- ▶ Course is fairly generic
 - ▶ claims to be tailored, but isn't super tailored really
- ▶ Term reports
 - ▶ 10+ page report (but good reflection)
- ▶ Fees

Resumes



General Advice

▶ **Tailor your resume**

- ▶ Make your resume easy enough to change that you can tailor it for different positions with different skill or technical requirements

▶ **You can't please everyone**

- ▶ Make a resume that will appeal to the greatest number of organizations (if you want to apply using the same resume several times)

▶ **There isn't one good format**

- ▶ Formatting is important, but certain templates will not work for everyone
- ▶ The format of your resume will depend on the kind of information you have
- ▶ I don't recommend accepting resume advice from one single person, get a variety of formatting advice

General Advice

- ▶ **It should look presentable**
 - ▶ Use a template if you don't want to create your own layout
- ▶ **Grammar Check**
 - ▶ Just do it
- ▶ **Don't oversaturate your skills**
 - ▶ Include position specific skills and ones that address specific needs
- ▶ **Make sure your resume can be scanned**
 - ▶ Many companies will have a pdf reader scan your resume for keywords

General Advice

- ▶ **Look at everyone else's resumes**
 - ▶ Find the resume of a student who got into a company you want to work for, you can infer factors helped them land the job
 - ▶ [/r/csMajors](#)
 - ▶ You can find a few hundred or so resumes to scan on the weekly resume roast threads



overleaf.com

Matthew's Subjective Ideas

Matthew MacRae-Bovell

Computer Science Student

matthewmacraebovell@outlook.com

github.com/MathyouMB

matthewmacraebovell.com

🚩 Languages

JavaScript

Ruby

Python

Java

Golang

🖥️ Frontend

React

Redux

Webpack

HTML/CSS

📦 Backend

EXPERIENCE

Score Media & Gaming Inc. / Software Developer Intern

Elixir Phoenix Ruby on Rails Kubernetes CircleCI

01/2021 - Present

Sports Core Team - developing the EKS hosted microservices behind TheScore's sports media application

- Currently developing the core **Phoenix** based data ingestion service that normalizes data from third-party providers
- Utilized tools such as **Datadog** and **Splunk** to monitor **Kubernetes** infrastructure

Fullscript / Software Developer Intern

Ruby on Rails React TypeScript GraphQL Docker

09/2020 - 12/2020

API and Integrations Team - building the developer API for Fullscript's healthcare ecommerce platform

- Added **models**, **RESTful** endpoints, and **backend** service objects to Fullscript's monolithic **Ruby on Rails** application
- Integrated **OAuth** based login into an existing login flow by modifying **React** components and **GraphQL** queries
- Expanded Fullscript's test suite by writing **unit** and **integration** tests using **RSpec**, **Jest**, and **Enzyme**

Kinaxis / Application Platform Developer Intern

ASP.NET C# Java Maven Jenkins

05/2020 - 08/2020

Platform Team - developing the scalable web services that power Kinaxis' supply chain management platform

- Worked with **ASP.NET** to build and maintain Kinaxis' performant and scalable **SOAP** based web services
- Packaged artifacts using **Maven** to remove unnecessary compilation and improve build time of core **Java** client

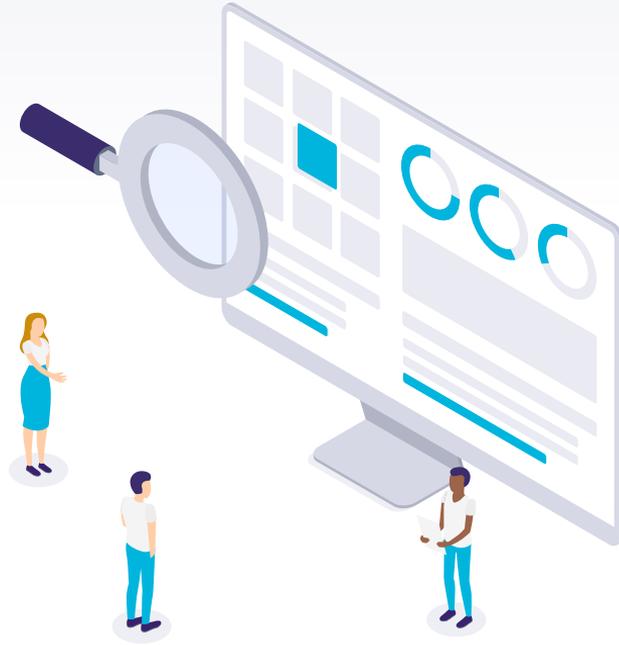


Projects

Great way of selling yourself and showcasing skills if you do not have experience

- ▶ Build something you want yourself
 - ▶ Build something that helps you learn new skills
 - ▶ Build something someone else needs
- 

After Applying



▶ After Applying

- ▶ **OA - Online Assessment**
 - ▶ Take home project challenge
 - ▶ Time-based code challenge
- ▶ **Behavioral "HR" Interview**
 - ▶ Communications skills
 - ▶ Culture Fit
- ▶ **Technical Interview**
 - ▶ Algorithms
 - ▶ OOP Questions
 - ▶ System Design

▶ Interview Prep

- ▶ **Technical**

- ▶ Practice Questions - <https://leetcode.com/>
- ▶ Practice Interviews - <https://interviewing.io/>

- ▶ **Glassdoor**

- ▶ You can usually read about a company's interview process through different entries on glassdoor

▶ 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)