

# Career Propulsion in College

With Samantha Coyle

# Samantha Coyle

## Who am I?



TXState 2020 Alumni

Identical twin

Cat mom (lol)

Software engineer @ Diagrid

Gopher & Open Sourcer

Soon-to-be author

Conference lover

Hard worker

# Overview

How to set yourself up for success

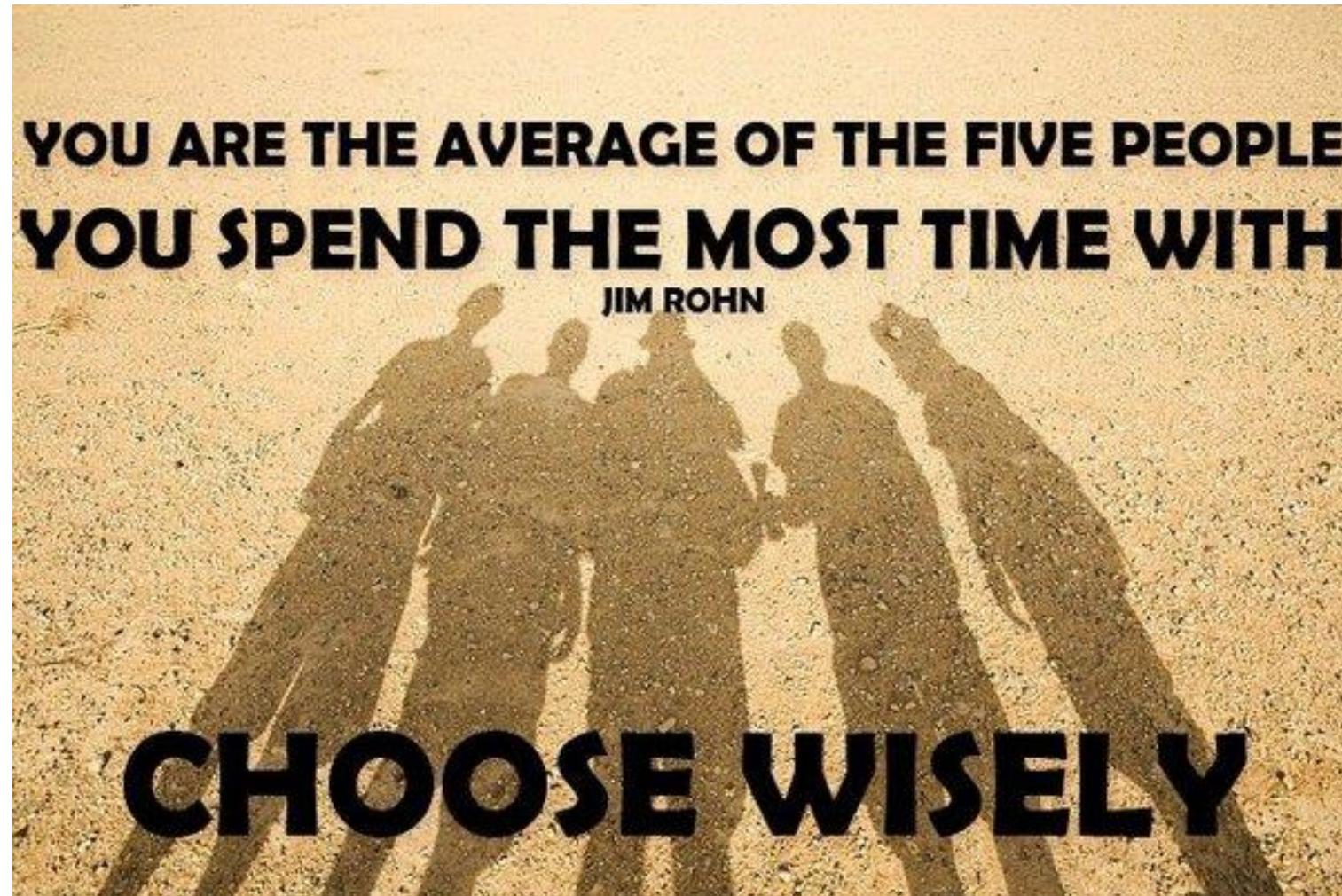
Internships

Interview resources

Conclusion

How to set yourself up for success

# Purposeful with Your People



# How I was purposeful with my people @TXST

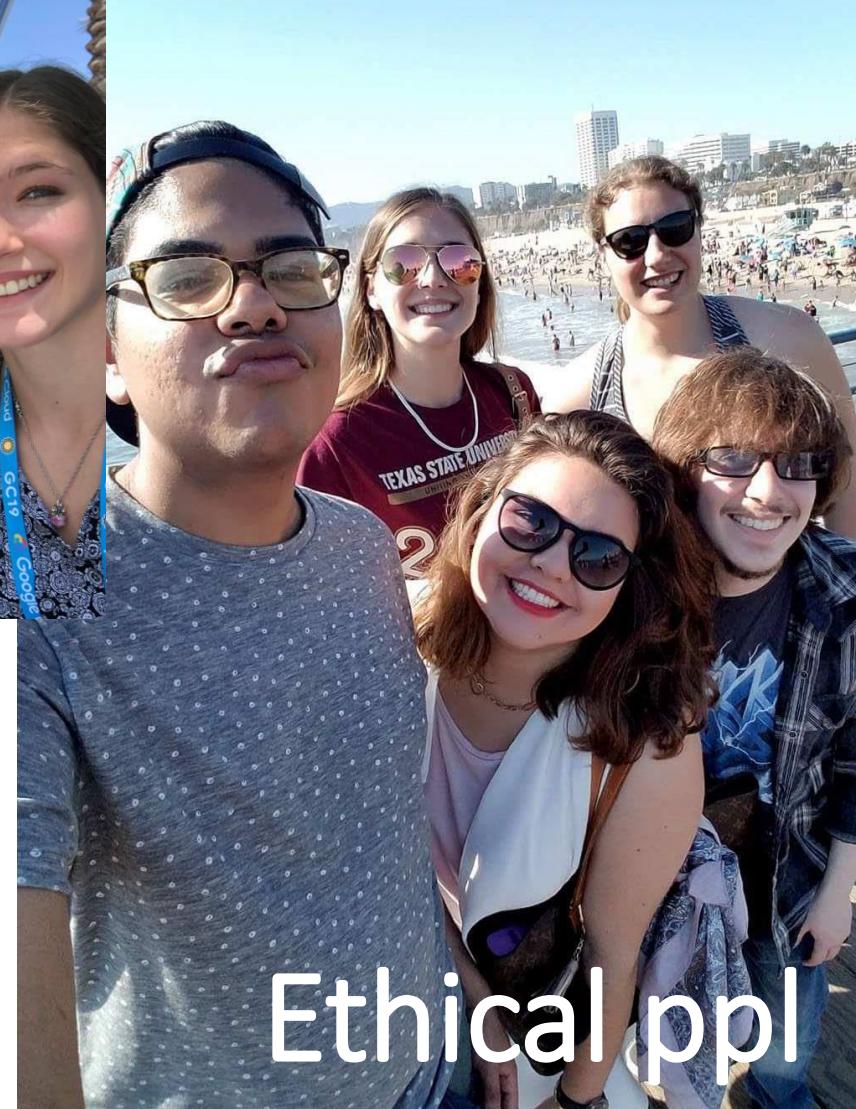


Limited time



Role model

Mentorship



Ethical ppl

# How I'm purposeful with my people still

Female role  
models



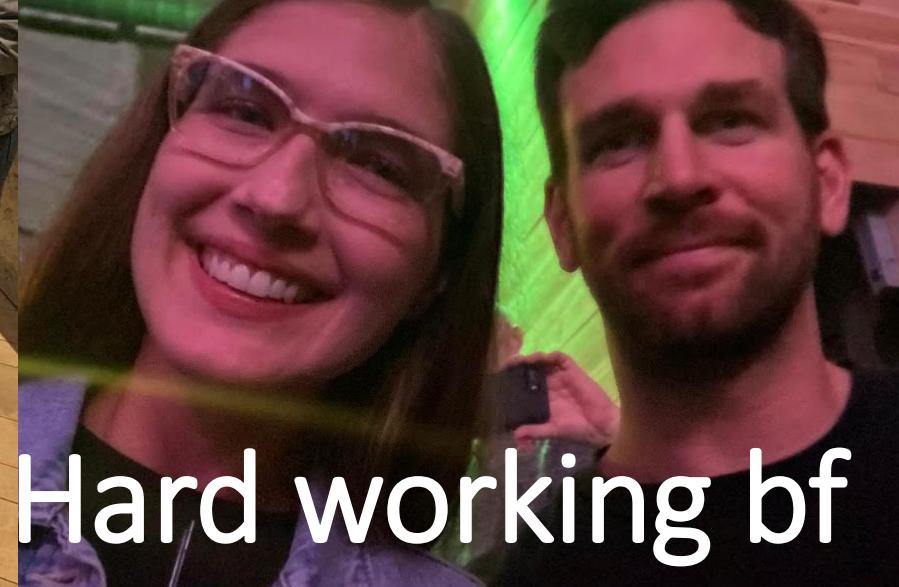
Inspiring  
community



Go-getter friends



Hard working bf



# Reflection

Who do you surround yourself with?

Should you make any changes?



# Purposeful with Time



Success happens when you do things with purpose

Do one thing at a time and do it right the 1<sup>st</sup> time

Be proactive instead of reactive

Prepare and practice

Follow a routine & create checklists

# Purposeful with Time



“

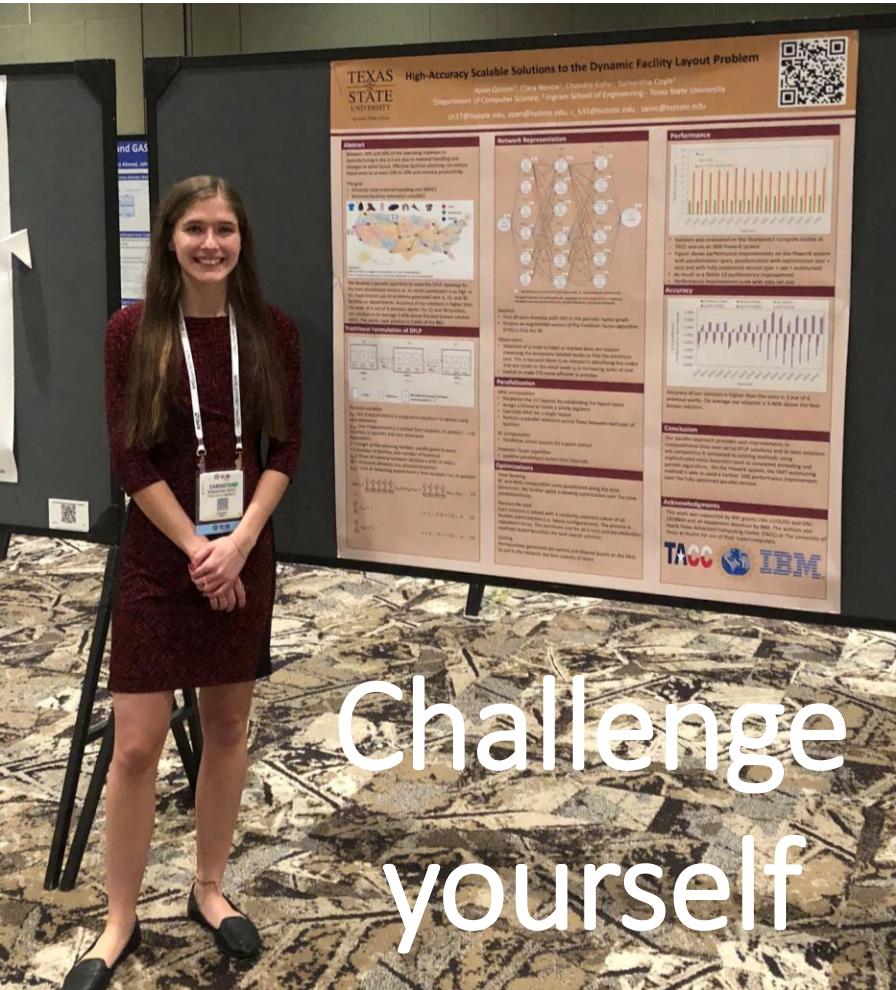
FALLINTIME.COM

The busier  
you are, the  
more  
intentional  
you must be.

MICHAEL HYATT

”

# How I was purposeful with time @TXST



Challenge  
yourself



Find work that grows you

Apply to scholarships

# How I'm purposeful with time still

## Foster worthy relationships

# GHC



## Practice!

**RISING TECHNICAL CONTRIBUTOR AWARD**

**Samantha Coyle**  
DIAGRID

*For demonstrating technical leadership well beyond her years; for tireless service in community and professional organizations; and for mentoring young engineers, guiding them on the path to success.*

**S**amantha Coyle is a software engineer, public speaker, and upcoming author at Diagrid, a globally distributed company that supports application developers by providing tools and application programming interfaces for building cloud-native applications. Her engineering efforts are dedicated to empowering developers to run high-scale, modern applications using open-source technology. With technical skills and an innovative mindset, Coyle has made significant contributions to Diagrid, solving challenges involving machine learning and edge computing. She is currently working on fully distributing machine learning models across multiple environments. Coyle is also involved in developing computer vision-based containerized applications and Go programming language microservices for industrial edge applications. Coyle enjoys all things open source and making contributions within the Dapr (Distributed Application Runtime) community. In the recent year, she contributed the feature most asked for by the Dapr community, a low-code editor for Dapr configuration files. Despite her short time in industry, Coyle has earned the trust of her team as a technical contributor and valuable resource. As a high-profile engineer demonstrating technical prowess, she contributes her knowledge to the community, sharing learnings at multiple conferences, including the Grace Hopper Celebration of Women in Computing, Women Who Code events, Open Source Summit North America, GopherCon, and more. Recently, Coyle chaired the Go for People's award for Community, a recognition of users of the Go programming language, and GopherCon, which is a Go developer conference. She is also involved in Go's diversity and inclusion (D&I) in the Go community. Coyle recognizes the need for change in the workplace and volunteers time to promote D&I and support early-career individuals. She also obtained a Kubernetes Application Developer certification in 2021 and is authoring a technical book to be published in late 2022.

An active member of Women Engineers and founder, Coyle serves as industry advisor for the SWE Technical Mentorship Program. She planned the university's SWE mentorship program, provided input and assistance with SWE semester events, and promoted SWE awareness and membership on campus.

Coyle became a software engineer after being inspired by her older brother, who blazed a successful technical trail for her and her identical twin sister to follow. The three siblings are all Go backend engineers who regularly attend GopherCon and other technical conferences together.

In her spare time, Coyle is an avid traveler and animal lover, and is always seeking adventure in the era of remote work.

# Reflection

What do you spend your time one?

What deserves more time in your life?

Should you make any changes?



# Think Outside of the Box

Tough market & economy  
Figure out how to stand out  
Go after what you want in life  
No one will just give it to you  
You are better than your excuses



# How I Thought Outside of the Box @TXST

- Business cards
- “Professional thinker”
- Twins at career fair
- International Business Ethics Case Competition
- Scholarships for conferences
- Research opportunities
- Asked to work for professors
- Dell Hackathons - > job
- Website for cooking business
- 4 internships



# How I Think Outside of the Box Still

Volunteer

Twins @Diagrid

Conference call for paper boards  
& diversity board

Technical reviewer for Go  
textbooks

Authoring Go technical textbook

Conference presentations x5

Startup life



# Reflection

What ways are you unique professionally?

What ways can you work on to better stand out professionally?

Are there overlaps you can leverage?

Should you make any changes?



# Easy hacks to stand out

Solid resume that you put effort on

Personal website, even if basic

LinkedIn profile

Twitter profile

Github portfolio

Contribute to open source projects

Go out of your way to find mentors

Using your resources

Professors remember who visits their office hours and/or takes advantage of their time ;)

# Start & iterate

## Welcome to Cassandra Coyle's Website

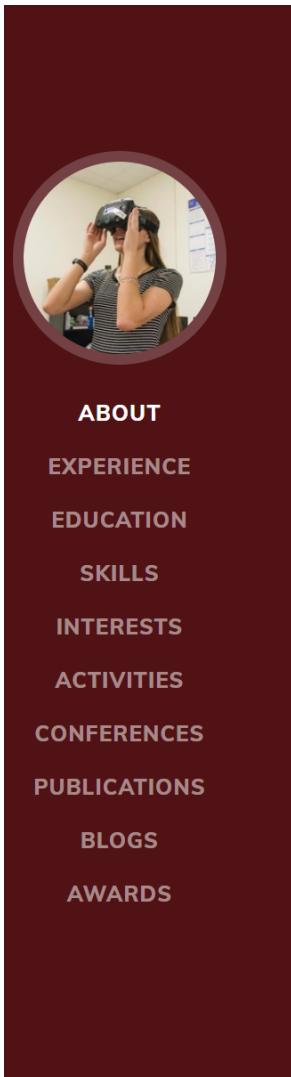
### Welcome to Cassandra Coyle's Website

I'm a Go Backend Engineer at Hashicorp. I am eager to refine my skills and better the software I work with on a daily basis to better enable automated process orchestration.

Use this [link](#) to view my repositories and Open Source contributions, as I continue to learn and improve upon my skills.

Works well with this collaborator.

V1



# SAMANTHA COYLE

AUSTIN, TX · (830) 477-1833 · [SAM@SAMCOYLE.ME](mailto:SAM@SAMCOYLE.ME)

Software engineer, Go enthusiast, and speaker with love for all things Open Source, Samantha spends her days developing Go microservices for computer vision-based applications for retail and healthcare solutions. She also has a history of developing Go microservices for industrial applications at the edge. She is CKAD certified, dedicates time to technical reviewing several Go textbooks, and is passionate about empowering early career and diverse professionals.

Samantha has presented at various conferences and competitions in the past that show her dedication to diversity and inclusion, sustainability and ethics, and growing herself as an engineer. Her favorite conference experience to date has been the surprise of presenting at GopherCon 2022 main stage!

Samantha is part of a family of Gophers! She enjoys attending GopherCon with her older brother, Ethan - the OG Gopher of the family, and her identical twin sister, Cassandra - the other Gopher in the family.



V2

# Start & iterate again

## **EXPERIENCE**

Data Structures and Assembly Language Grader  
Texas State University **January 2018 - Present**

- Complete assignments in a timely fashion
- Maintain satisfactory communication channels

Supplemental Instruction **August - December 2017**  
Texas State University

- Create session plans to cover class discussion for group study
- Facilitate peer collaboration and improve study skills

## **ACTIVITIES**

- Women in Science and Engineering (WISE) Conference computer science research poster competitor, 2018
- Austin Digital Jobs recruiting mixer in Austin, 2017
- International Business Ethics Case Competition, team captain, 2016 - Present
- Texas State Computer Science Club, member, 2016 - Present

# Resume vX

## EXPERIENCE

### **Software Engineer – Intel**

Mar 2021 – Present

- Implement ML pipeline at the edge for a healthcare solution using Go microservices
- Represent team and collaborate with external partners on API adjustments and considerations
- Implement Go integration testing solution and observability features
- Implement backend for security as a service solution using Postgres, Python, Docker, and Go
- Assist with AI dev experience project to identify pain points and potential solutions

### **Junior Software Engineer – Fathom5**

June – Mar 2020

- Implemented backend for several Go microservices using Ryer pattern and Cobra
- Set up monitoring services using Prometheus, Grafana, and Docker

### **Software Engineer Co-op – AMD**

Jan – May 2019

- Created templates for building and deploying packages and docker containers
- Contributed on a team developing infrastructure w.r.t. internal tools

### **Software Engineer Intern – Dell Technologies**

May – Aug 2019

- Utilized Azure CLI to devise scalability plan for an expanding AKS cluster
- Implemented automation software to manage failing services

### **Software Engineer Co-op – Nokia**

Oct – Dec 2018

- Created AWS lambda functions with a focus on cost efficiency
- Utilized helm to gather Kubernetes metrics for SaaS infrastructure

### **Software Engineer Intern – CGI**

June – Aug 2018

- Designed database and backend infrastructure for Project Labor Management

## CONFERENCES

- Presenter - Software Professionals Intel Conference: Integration Testing with Go

Nov 2022

# Benefits of starting early on things like this

More awareness to you

Stands out

Builds up portfolio

Makes you think of how you're presenting yourself

Intentionality

Saves you time down the road

You can thank yourself for making things easier early on

# Internships

# How to find internship opportunities

## CONNECTIONS!

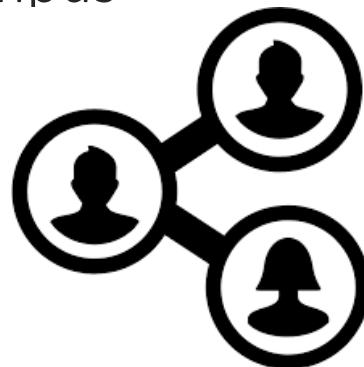
Purpose with everything you do

Career Fairs – internal & external

Professors – research & connections

Random job postings

Groups on campus



# Preparation

Class work, do homework & readings

Find what works for your brain

Create a habit / schedule and stick to it

Mock interviews

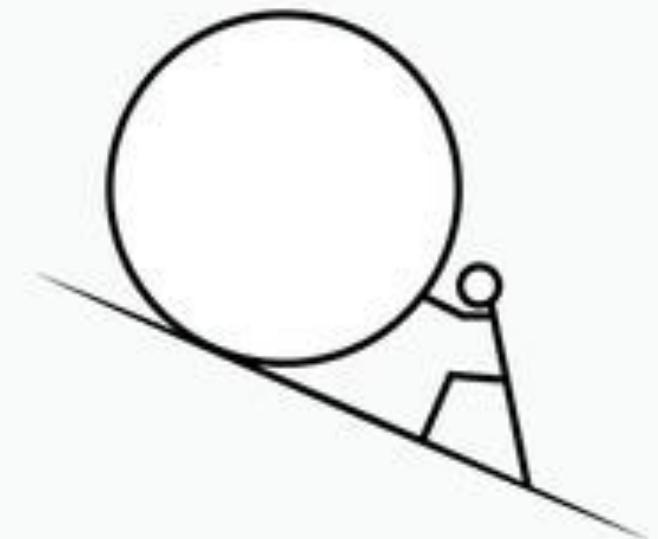
No one will hold your hand

No one will force you to apply

No one will make you successful, other than yourself

No one sets the tone for your life, other than yourself

Ultimately it's up to you to try your best to prepare as best you can



# Stay strong & trust the process

“

It's your reaction to  
adversity, not adversity itself  
that determines how your  
life's story will develop.

DIETER FUCHTDORF

We all get nervous  
Power pose – I do it!  
We all get “no” many times  
Learn & improve  
Eventually, you'll get a yes  
Worth the extra ball to juggle  
Find balance with school duties  
Find balance with life

# Balance your time

Previous Week		Week of Sep 03, 2018 (106 of 120)				
	Monday	Tuesday	Wednesday	Thursday	Friday	
9am						
10am		CS 4328-002 14702 Class 9:30 am-10:50 am DERR 00240	PHYS 1115-012 12913 Class 10:00 am-11:50 am SUPP 00128	CS 4328-002 14702 Class 9:30 am-10:50 am DERR 00240	WORK @ NOKia	WORK @ NOKia
11am		Work @ NOKia		WORK @ NOKia		WORK @ NOKia
12pm						
1pm						
2pm	PHYS 1315-007 18032 Class 2:00 pm-3:20 pm IGRM 04101		PHYS 1315-007 18032 Class 2:00 pm-3:20 pm IGRM 04101			
3pm						
4pm	MATH 3305-006 15305 Class 3:30 pm-4:50 pm DERR 00122		MATH 3305-006 15305 Class 3:30 pm-4:50 pm DERR 00122			
5pm	CS 3398-001 13205 Class 5:00 pm-6:20 pm DERR 00234		CS 3398-001 13205 Class 5:00 pm-6:20 pm DERR 00234			
6pm						

# What to expect during an internship

Real world experience

Overlap with what you learn in class

Team work

Collaboration & communication

Many learnings

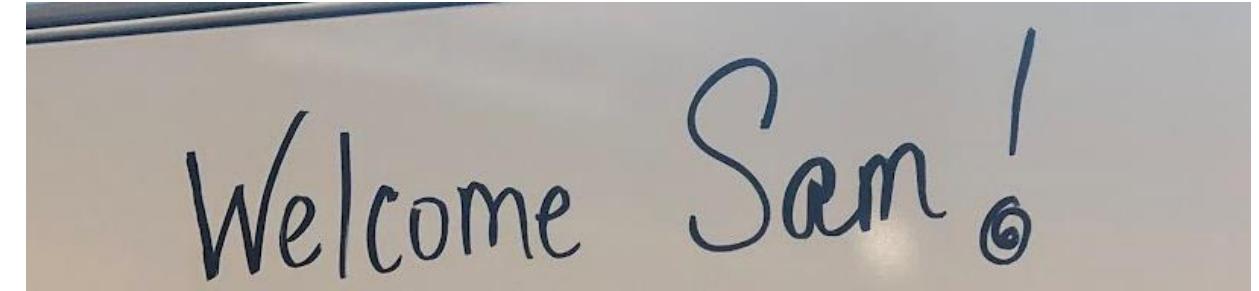
Growth can be painful

Learning what you like & don't like

Expanded network

Not everything to be perfect

Fun & friendship & community



# Benefits of an internship

- Growth on many levels
- Learning likes/dislikes
- Expanded network & friends
- Volunteer opportunities
- Networking opportunities
- Potentially full time offer
- You need a job eventually, so the earlier the start the better
- Fun & friendship & community
- Maybe goats ☺



# What Internships Propelled me in College

CGI

Database knowledge

Backend experience

ASP.NET Csharp web app

Adversity in workplace experience

Nokia

Kubernetes & Cloud experience

Monitoring & observability

Time management

TXST  
Research & Grader

Presentation skills

Conference exposure

Value in research & performance considerations

Dell

Cluster scaling exposure

Different cloud experience

Go experience

Adversity in workplace experience

AMD

Python + data processing experience

Worked with different kinds of engineers

Some infrastructure exposure

Adversity in workplace environment

# How Internships Propelled me in College

Made me stronger technically

Made me stronger emotionally & mentally

Strong value in culture

Knowing what you like/dislike is very valuable

Matthew Principle

As you start to succeed, you succeed more & more rapidly



# Interview Resources

# Leetcode Robot Mode

<https://seanprashad.com/leetcode-patterns/>

**LEETCODE PATTERNS**

Question List    Tips    Acknowledgements

**Problems pattern frequency**

Heap : 17   Greedy : 5   Binary Search : 1   Intervals : 1   QuickSelect : 1   Bucket Sort : 1

0 / 180

Difficulty	Solved	Total
Easy	0/37	37
Medium	0/113	113
Hard	0/30	30

Reset

Questions   Solutions   Show/Hide Patterns

Difficulty   Companies

All     All  

Kth Smallest Element in a Sorted Matrix     Binary Search   Heap   Medium        

Find K Pairs with Smallest Sums     Heap   Medium

Meeting Rooms II     Heap   Intervals   Medium

# Hackernoon 14 Patterns Article

<https://hackernoon.com/14-patterns-to-ace-any-coding-interview-question-c5bb3357f6ed>

1

2

3

4

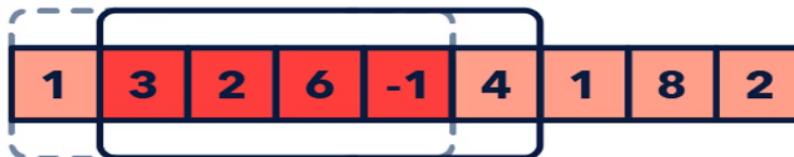
## 1. Sliding Window

The Sliding Window pattern is used to perform a required operation on a specific window size of a given array or linked list, such as finding the longest subarray containing all 1s. Sliding Windows start from the 1st element and keep shifting right by one element and adjust the length of the window according to the problem that you are solving. In some cases, the window size remains constant and in other cases the sizes grows or shrinks.

Sliding window -->



Slide one element forward



Following are some ways you can identify that the given problem might require a sliding window:

- The problem input is a linear data structure such as a linked list, array, or string
- You're asked to find the longest/shortest substring, subarray, or a desired value

Common problems you use the sliding window pattern with:

- Maximum sum subarray of size 'K' (easy)
- Longest substring with 'K' distinct characters (medium)
- String anagrams (hard)

# Coding Patterns Blog for More Details

<https://emre.me/categories/#coding-patterns>

**coding-patterns**

## **Coding Patterns: Longest Common Substring/Subsequence (DP)**

⌚ 8 minute read

In Coding Patterns series, we will try to recognize common patterns underlying behind each algorithm question, using real examples from Leetcode.

## **Coding Patterns: Palindromes (DP)**

⌚ 9 minute read

In Coding Patterns series, we will try to recognize common patterns underlying behind each algorithm question, using real examples from Leetcode.

## **Coding Patterns: Staircase (DP)**

⌚ 9 minute read

In Coding Patterns series, we will try to recognize common patterns underlying behind each algorithm question, using real examples from Leetcode.

# Coding Patterns Blog for More Details

<https://emre.me/categories/#coding-patterns>



Emre Bolat

Software Architect

Follow

## Coding Patterns: Fast & Slow Pointers

⌚ 10 minute read

📄 On this page

Problem: Linked List Cycle

Fast & Slow Pointers Solution

Problem: Linked List Cycle II

Fast & Slow Pointers Solution

How to identify?

Similar LeetCode Problems

In [Coding Patterns](#) series, we will try to *recognize* common patterns *underlying* behind each algorithm question, using real examples from [Leetcode](#).

Previous posts were about [Sliding Window](#) and [Two Pointers](#) patterns and today, we will introduce [Fast & Slow Pointers](#)

# Using your TXST resources

Professors

Supplemental Instructors

Office hours

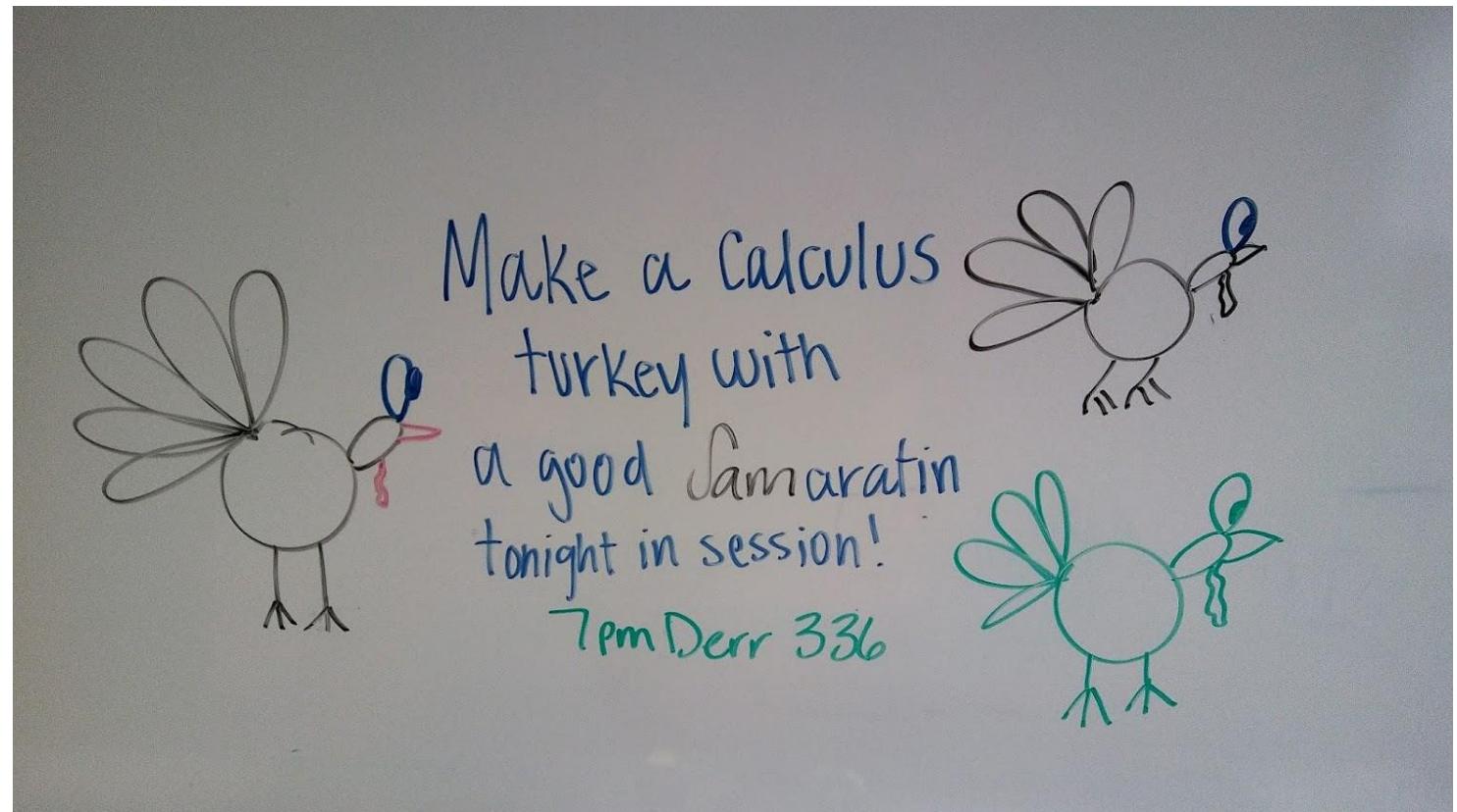
Career fair

Career services

Network

Mentors

Groups on campus



# Conclusion

86400

# 86400

We all get the same amount of time in  
a day to achieve all that our hearts  
desire

468000

# 468000

We all get the same amount in college  
to achieve all that our hearts desire

468000

How do you want to best use your  
time here?

# Me VS Me Mentality

Matthew principle

Don't use excuses

Don't compare yourself to me either



How can you be better to prepare for your career?

It's coming whether you're ready or not ;)

# Goal Setting

3 pillars

Mine are: Go, Open Source, promoting diversity in engineering  
What are yours?

How can you be better ever day?

Baby steps & intentionality

What do you want to get out of this class?

In what ways are you working towards that goal?

What do you want to have accomplished for yourself by the time you graduate?

# Goal Setting

3 pillars

Mine are: Go, Open Source, promoting diversity in engineering

What are yours?

How can you be better ever day?

Baby steps & intentionality

What do you want to get out of this class?

In what ways are you working towards that goal?

What do you want to have accomplished for yourself by the time you graduate?

Only you know what  
you want out of life, so  
go after it!

# Conclusion

Find your motivation

Keep working hard

Don't have to have it all figured out

Wait for something to show you the way

Discipline is everything

Get the interviews, and eventually you'll land a role

Just remember that it doesn't get any easier, so you may as well give yourself the head start

Take advantage of your resources

