Hack Smarter

Uber Canada

About Us

Erin Gallagher

iOS Developer
Uber Eats Ads

Flannery Jefferson

iOS Developer
Uber Commute

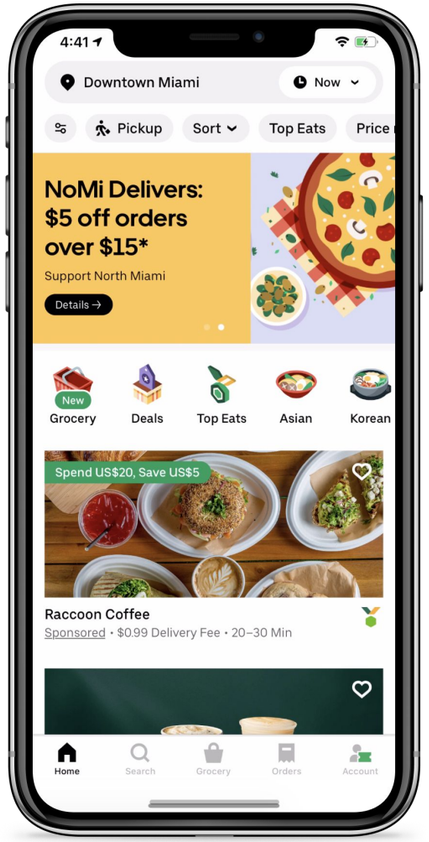
Michael Bieniek

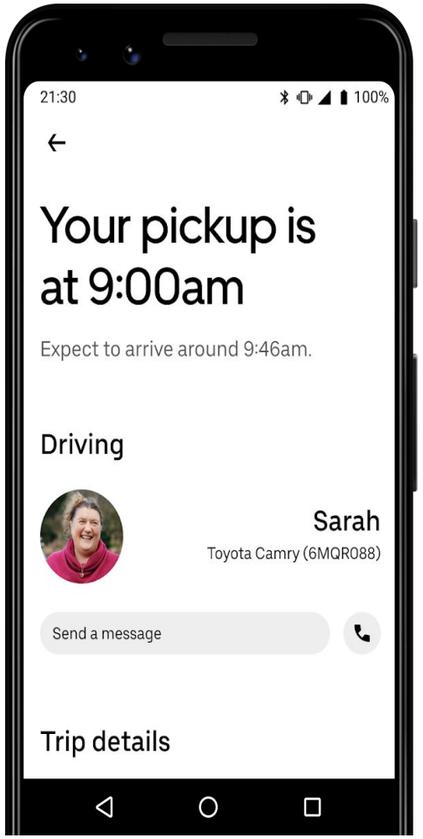
Android Developer
Uber Eats Ads

What are we working on?

Uber Eats **Ads**

Uber Commute





Uber will be judging the Education and Health hackathon category

Agenda

Where to Begin

Picking an Idea, how to plan your hackathon timeline

Git Basics

Setting up a github repository, important for your resume

Collaboration with Design

Using Figma, downloading icons & assets, prioritizing features

Working with Live Data

Hooking up a public API into your app

Developing UI Under a Time Constraint

Utilizing out of the box components, Design Patterns

The Final Demo

Tips for giving the best demo to the judges.

Where to Begin?

@erin

Picking an Idea

Start by learning about your team members. What are their strengths?

Align as a team on what your **goals** are for this weekend and discuss how each of you would define **success at this hackathon**.

Does one of the categories **inspire you**?

Are you looking to learn about a new **technology**?

Don’t spend more than **2 hours** brainstorming. Your idea will naturally develop and get better as you start making progress.

Picking an Idea

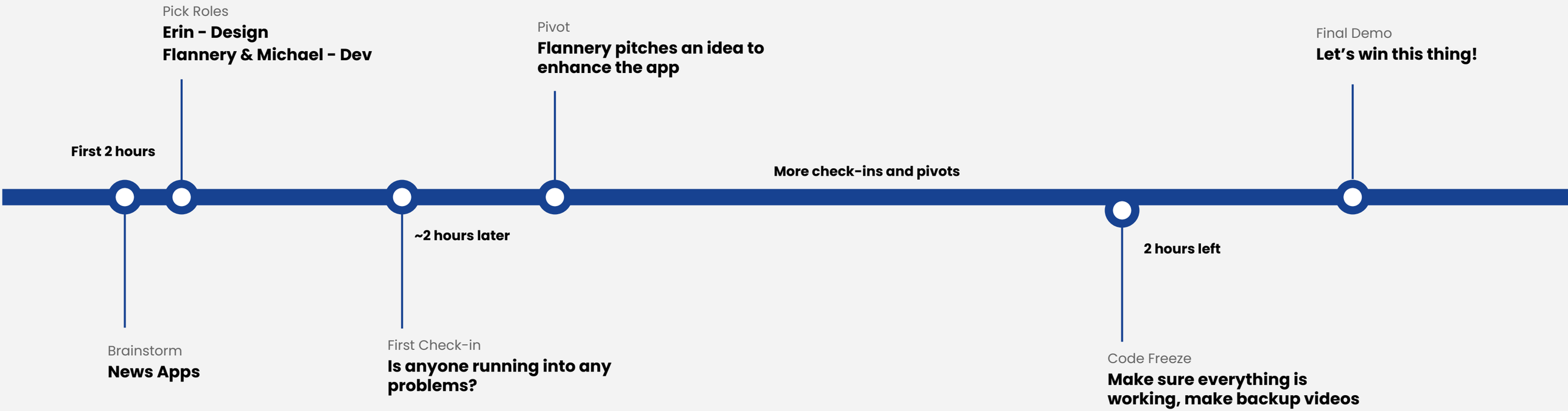
Flannery is a iOS developer with Swift experience. She wants to add a new project to her resume before she starts applying to internships in January.

Michael is an Android developer with Java and Kotlin experience. He really wants to win one of the category prizes!

Erin is a mobile developer with both Android and iOS experience but wants to work on her design skills at this hackathon.

1. **Strengths**
2. **Goals**
3. **What does success look like?**

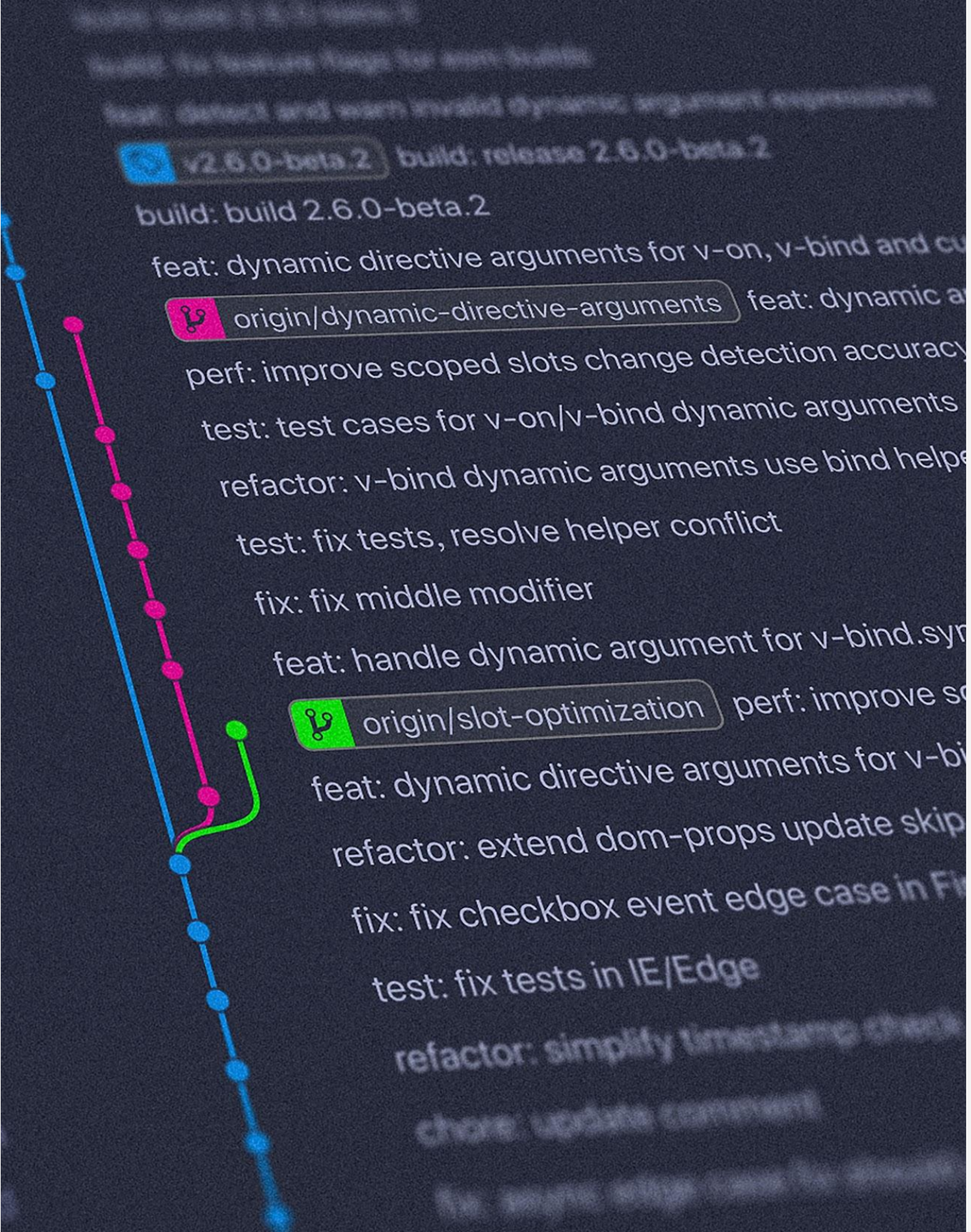
The Game Plan



Collaborating virtually can be challenging. Check out gather.town, a free video chatting web app with a twist. Create a virtual space which helps re-create the in person hackathon experience.

Let’s Git this Together

@erin



Git is a distributed version control system for your code.

GitHub is a hosting service that manages Git repositories.

Why Use Git?

Creates a **backup of your code** so you don’t lose it. Revert to a previous state if it’s no longer working.

Efficiently **share code** and work on a single project or file simultaneously.

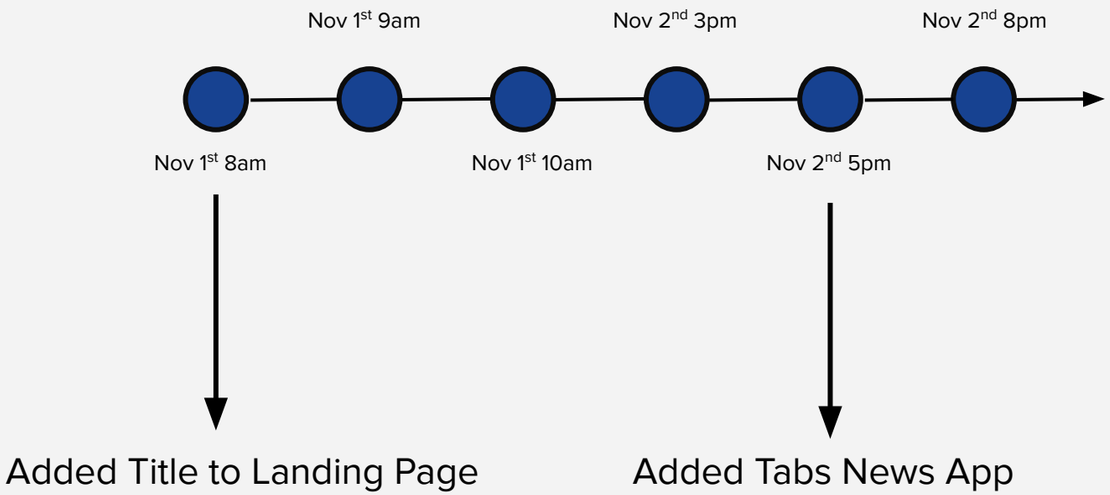
Recruiters look for candidates with github repositories

You don’t have to use the terminal if you want you use Git. Check out GitHub’s UI or a tool like Sourcetree that visualizes the version history system.

Demo - Git Repository Walkthrough

Git Version Control

Timeline of updates to the repository.



Commit:

A snapshot of the repository at a specific time.

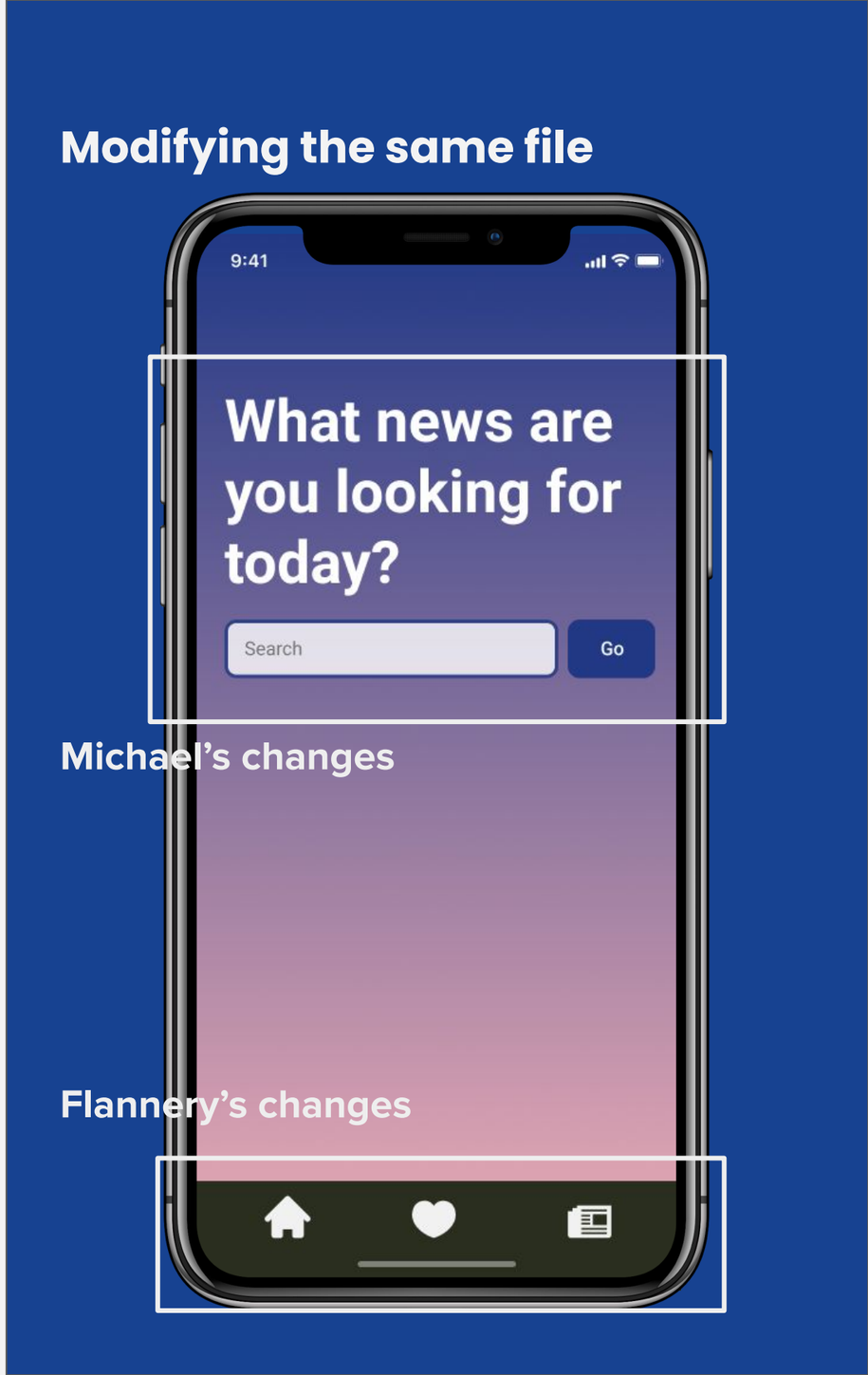
Git Use Case

Flannery is working on the bottom tab bar feature integrating it into the main screens of the app.

At the same time, **Michael** is completing the Landing Screen with search functionality.

Once they are finished, **Flannery** and **Michael** merge their work into the main branch on the github repository.

How will Flannery & Michael they don’t overwrite each others changes?

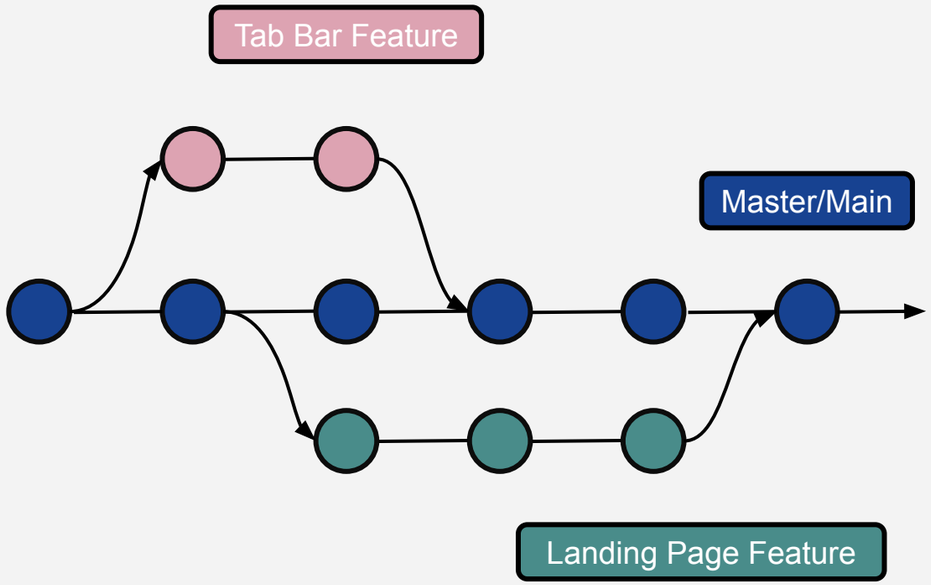


Git Branching

How will they ensure they don’t overwrite each other's changes? **Branches**

Master/Main Branch is the trunk of your tree. Generally used as the default place for all completed production code.

Feature Branch is a reference to a set of related changes that is progressing forward in isolation of the main/master branch.



Branch:

A pointer to a snapshot of your changes.

Used to develop features in isolation.

Git Commands

```
git clone https://github.com/uber-hackher-workshop/ios-workshop.git

git pull

git status

git commit -m “added search bar to landing page”

git push
```

This is a helpful guide to the basic git commands. Here is one on resolving merge conflicts.

Collaborating with Design

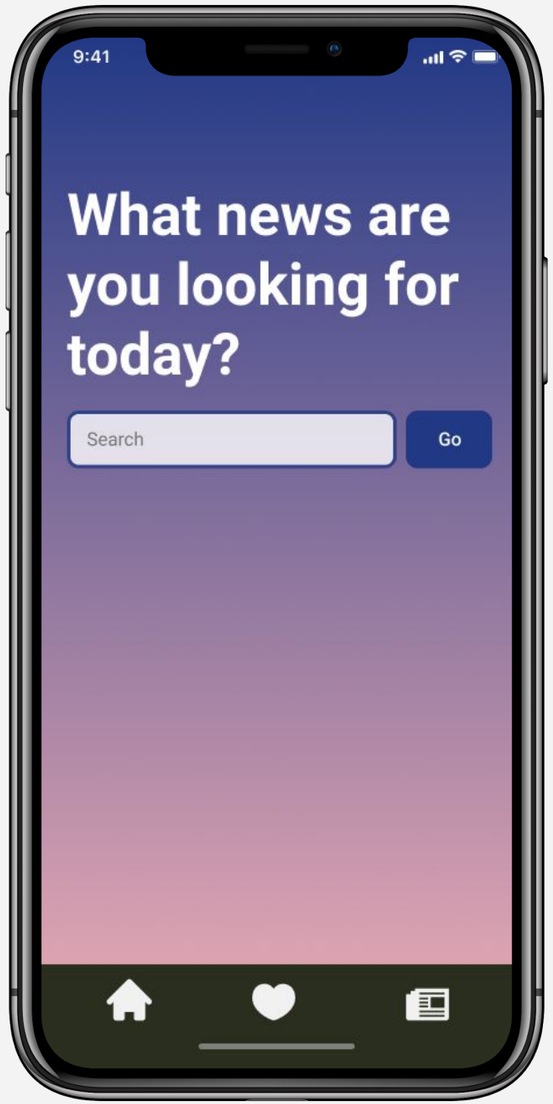
@erin

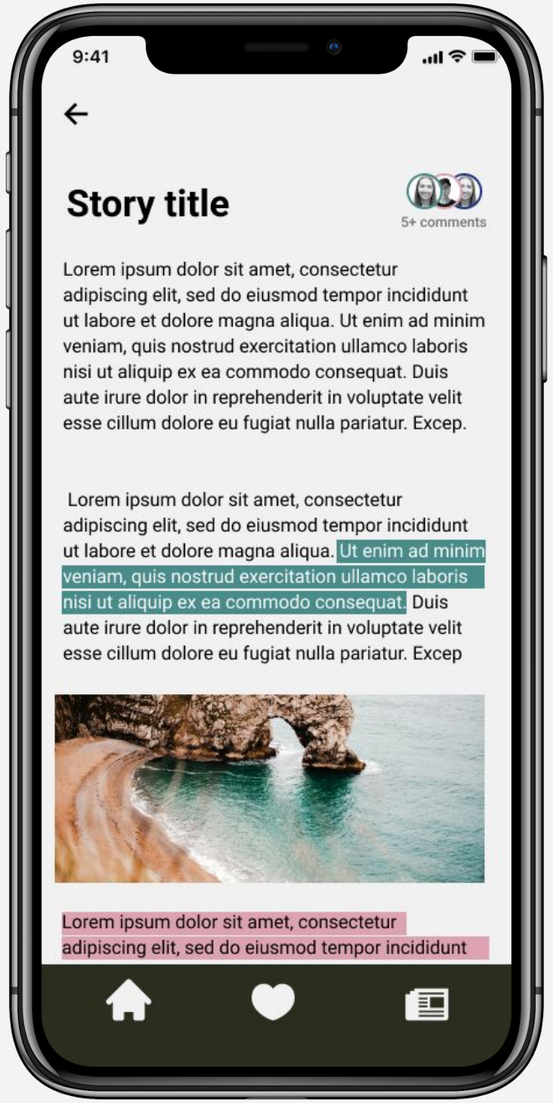
Figma

Collaborative Interface Design Tool

Export **Icon and Image** support for developers

figma.com





Demo – Figma Walkthrough

Working with Live Data

@michael

Demo – APIs

Summary

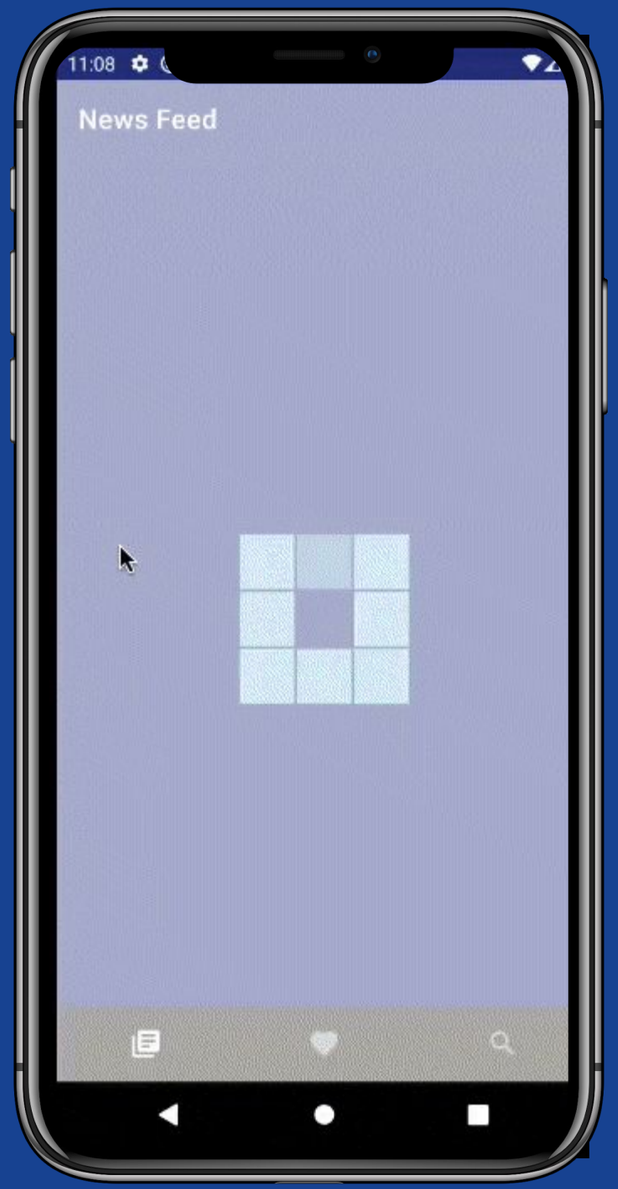
Postman is a great tool for sending test requests to an API.

Most APIs will require some form of **authorization** (typically done by adding a key/token to the request header).

Retrofit is an Android library that makes it easy to send and receive JSON from a REST service.

OkHttp is an HTTP client for Android that is responsible for low level network operations.

Get your own **API Key** from NewsApi.org to be able to use the Android sample app on your own

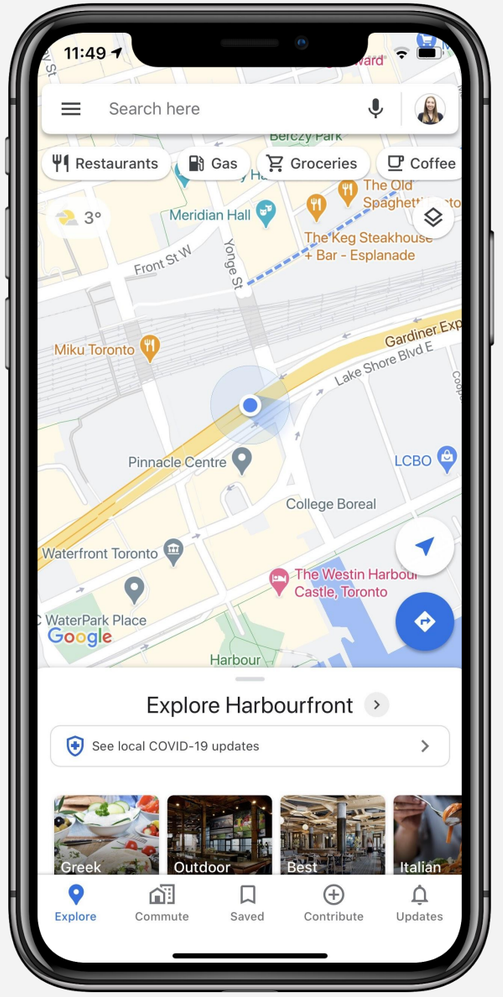


Beautiful UI Under Time Constraints

@flannery

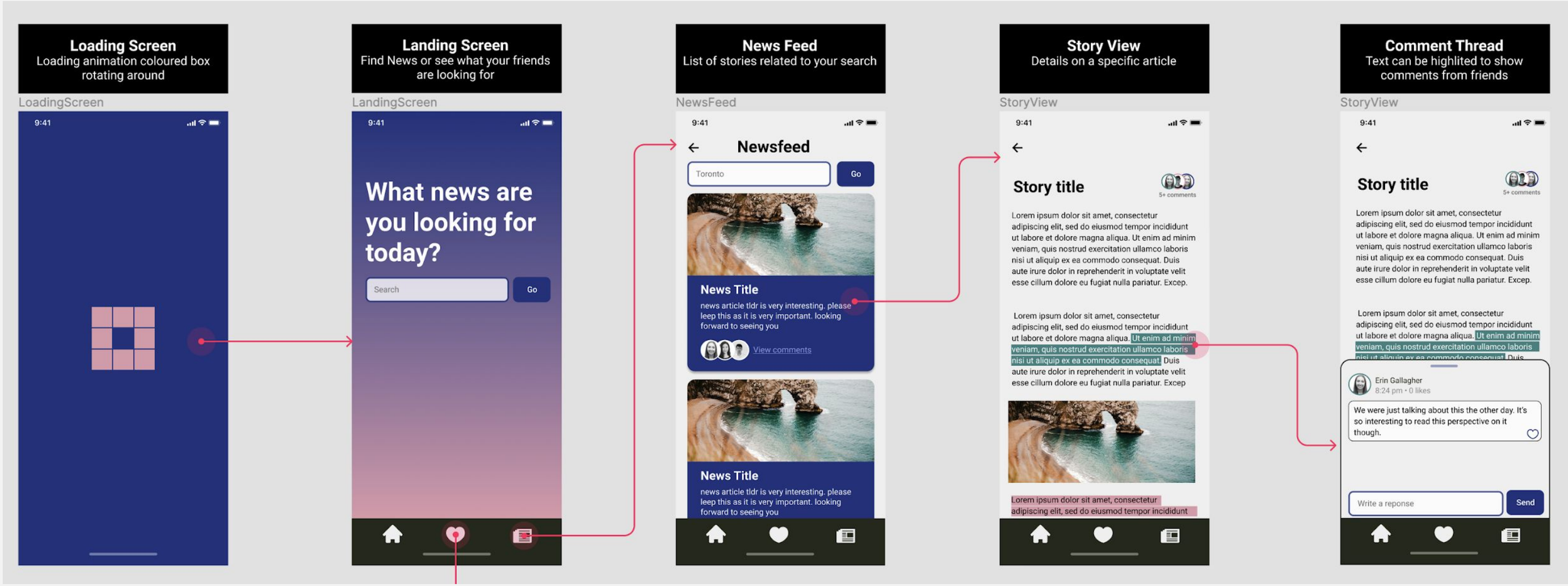
Design Patterns

Instagram

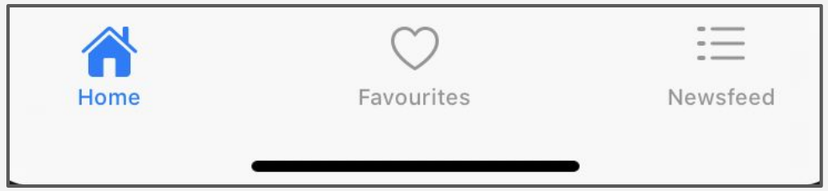


Google Maps

Our App's Designs



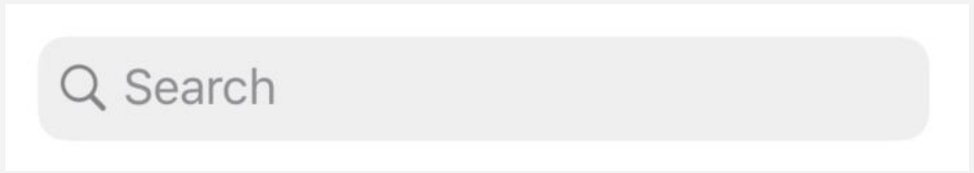
Tab Bars



iOS Default

Custom

Search Bar



iOS Default
44px

Custom
50px

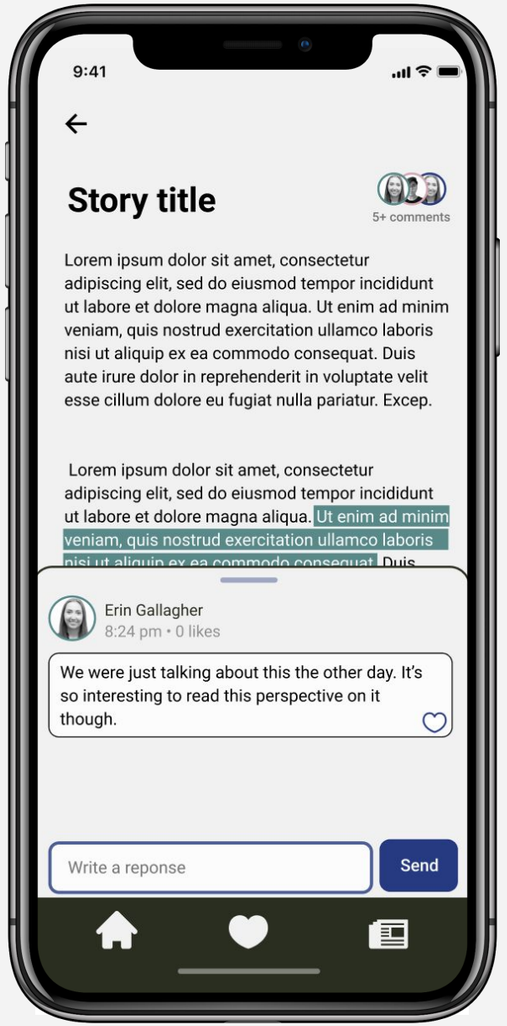
Navigation Bar

iOS Default
status bar height + navbar height = total
(44) + (56) = 110

Custom
status bar height + navbar height = total
(20) + (44) = 64

Bottom Sheet

iOS Default



Custom

Demo - Design Patterns

An App in 7 minutes

A storyboard with a table view

Connect the table view to a custom class

```
class FeedTableViewController: UITableViewController
```

Inside the custom class, create a variable to store our current list of loaded articles

```
var articles: [NewsArticle] = []
```

Override three table view methods to use the data from articles

```
func numberOfSections(in tableView: UITableView) -> Int
func tableView(_ tableView: UITableView, numberOfRowsInSection section: Int) -> Int
func tableView(_ tableView: UITableView, cellForRowAt indexPath: IndexPath) -> UITableViewCell
```

Create an instance of NewsAPIClient

```
let apiClient = NewsAPIClient()
```

On viewDidLoad, fetch the articles and store them in `articles` variable

Reload the table view

Customizations in a Weekend

1. Fonts
2. Accent Colours
3. Layout of table view cells
4. Icons (if assets are already provided)
5. Button & Text Field style

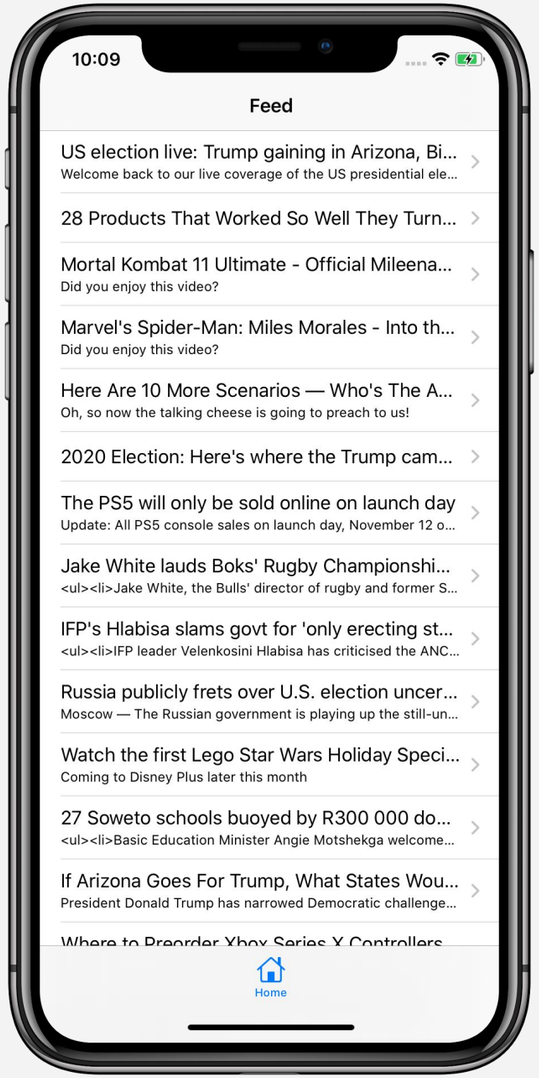
Further Customizations

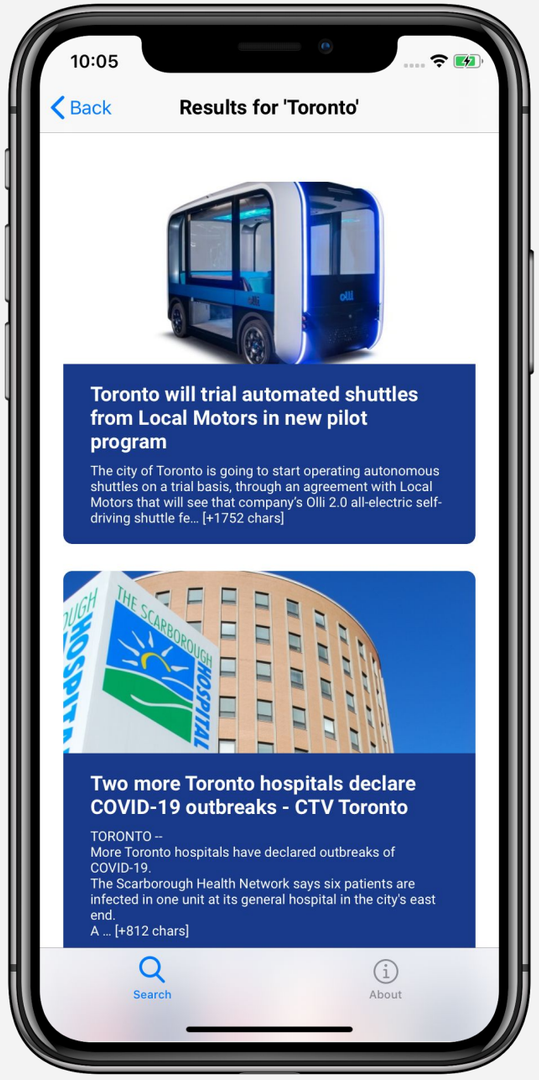
1. Bottom sheet modal behaviour
2. Custom navigation components
3. Search bar tweaks (corner radius, bg and text colors, icons)
4. Custom loaders
5. Inline errors

Avoid Customizing

1. Navigation bar height
2. Date pickers, other pickers
3. Alerts

Finding a balance





Additional Resources

Getting Started with **Storyboards**

- raywenderlich.com/ios-storyboards-getting-started
- https://developer.android.com/guide/topics/ui

Human Interface Design guidelines

- developer.apple.com/design/human-interface-guidelines
- https://material.io/develop/android

Writing your **API Network Client**

- swiftbysundell.com/articles/creating-generic-networking-apis-in-swift/

Rock the Final Demo

@erin

Final Demo

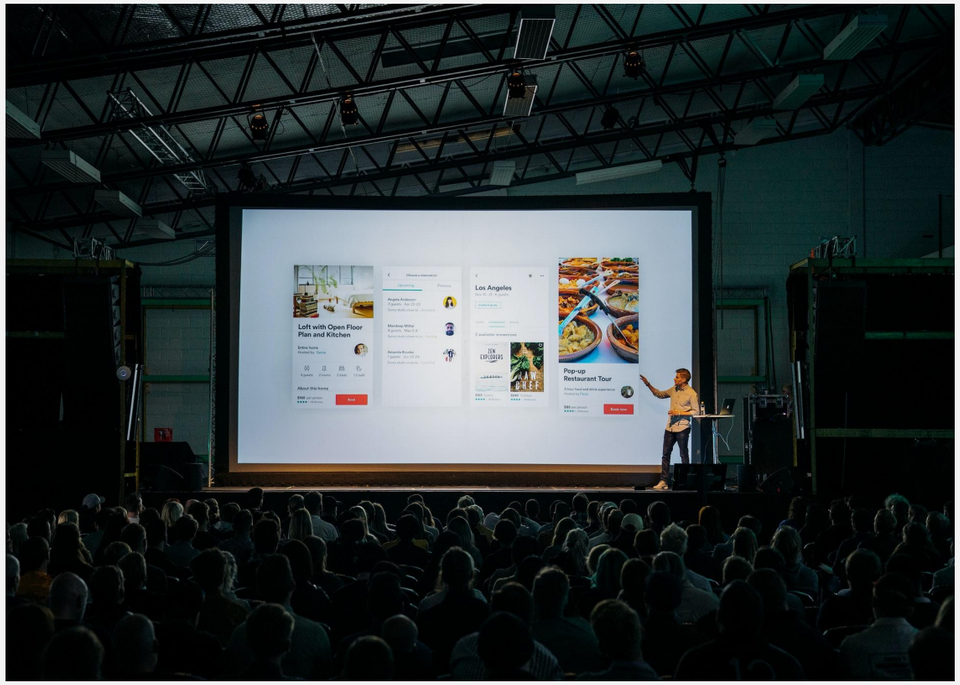
Research your judges beforehand. Know who you're pitching to.

Briefly outline the **problem you are trying to solve**.

Explain your solution before jumping into the demo.

Demo what you've built, that includes **designs and code**.

Be creative!



Practice being succinct and getting to the point. Repeating your part out loud a few times beforehand can help you cut down on filler content.

Q&A

@egallagher @fjefferson @mbieniek

Uber Toronto Summer 2021 Internships

Resume Drop Off Form 🔗