



A2: Traveling Salesmen

Domain Focus: Travel Planning

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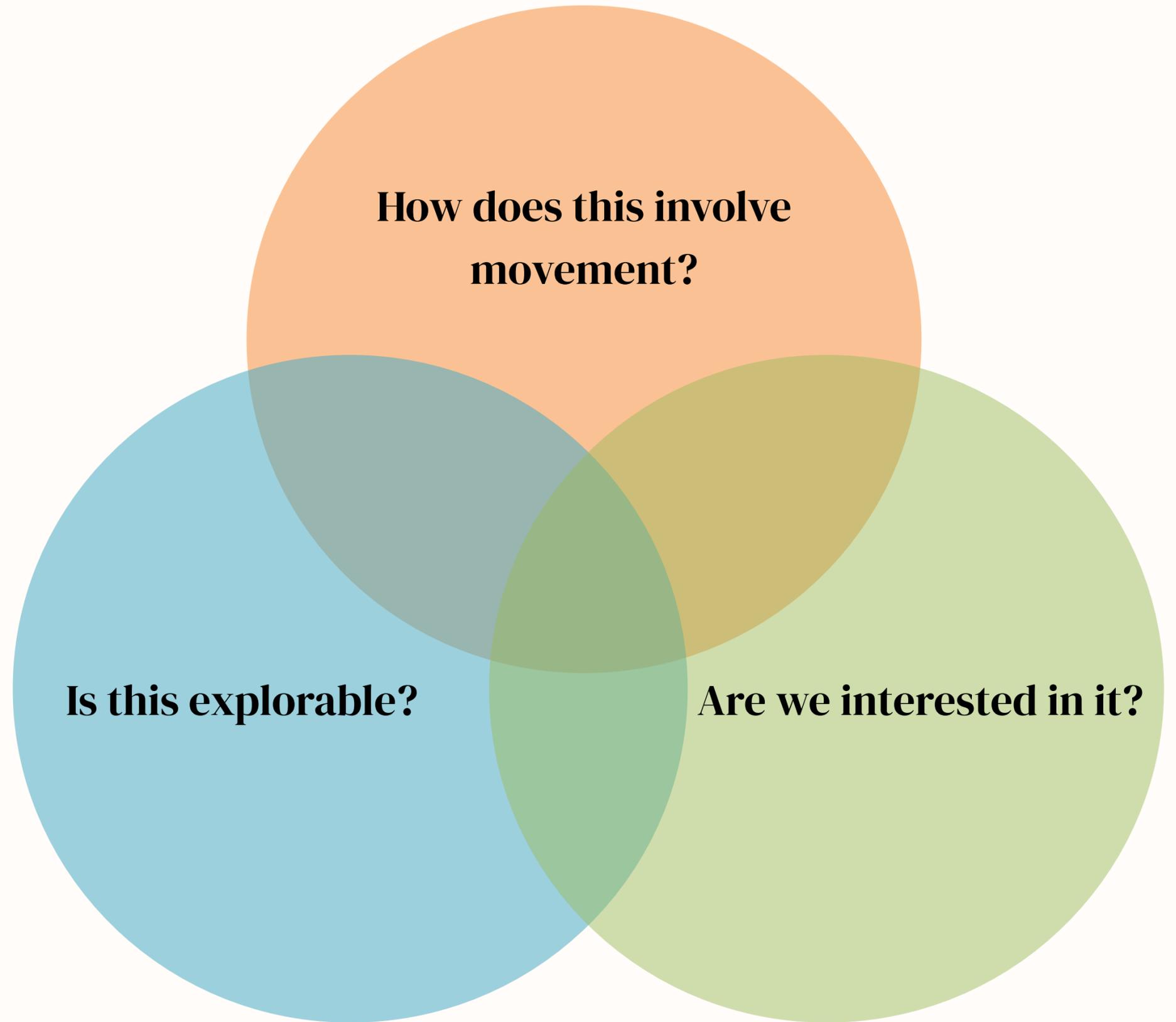
'26

Computer Science

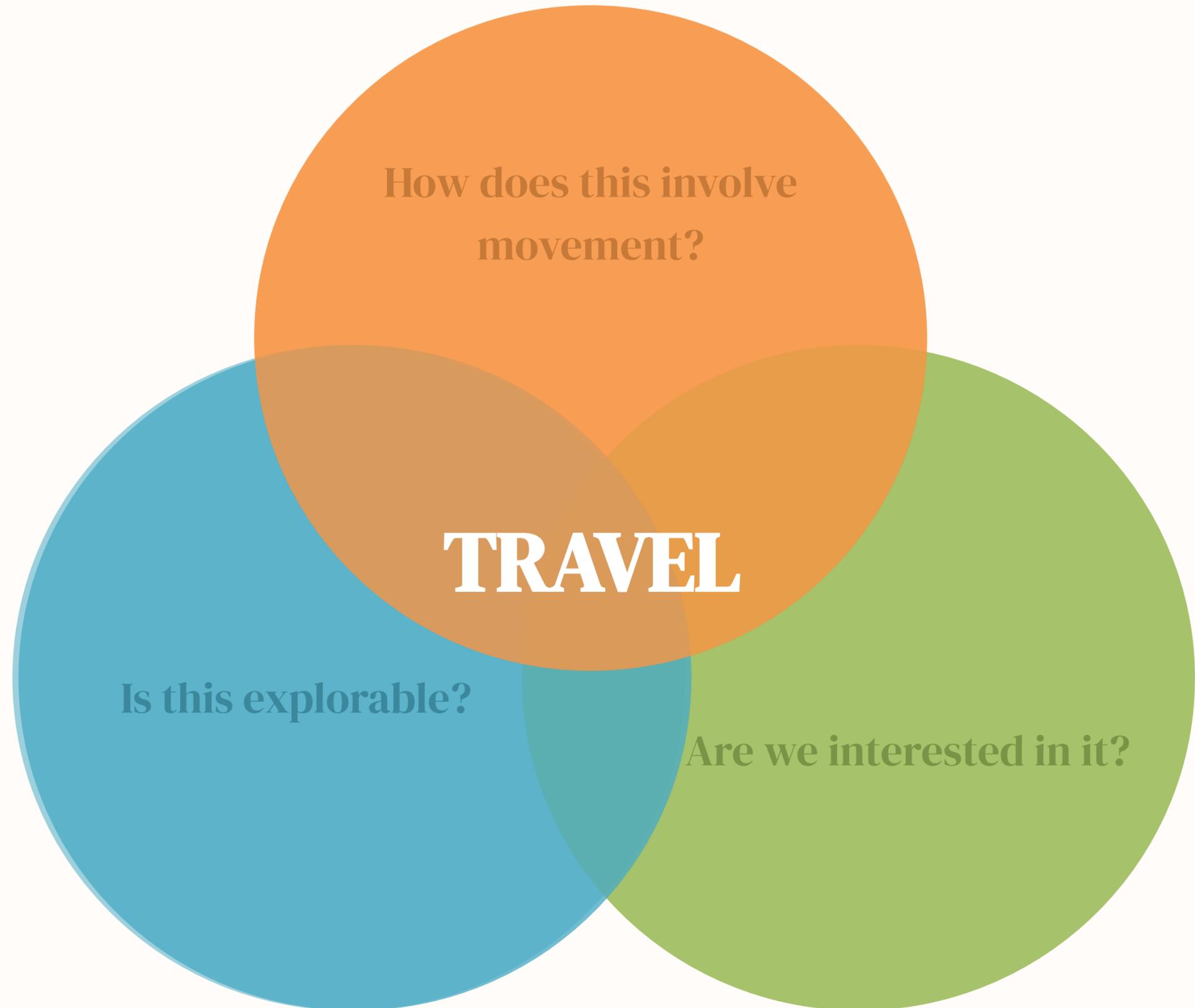
Brunswick, GA

Recorder

Last



**Last
Time...**



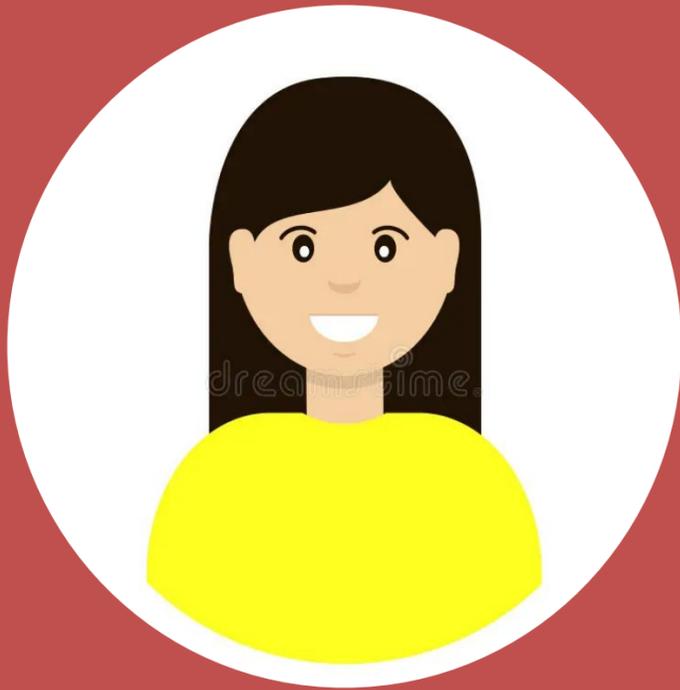
Finding Participants

- 1. Non-Stanford students**
- 2. Group travelers**
- 3. Families**

Our Participants



“Ethan”
Civil Engineer at Meta
Mexico



“Samantha”
IR Major @ Stanford
Virginia



“Jensen”
Tech Strategist
China



01 Ethan

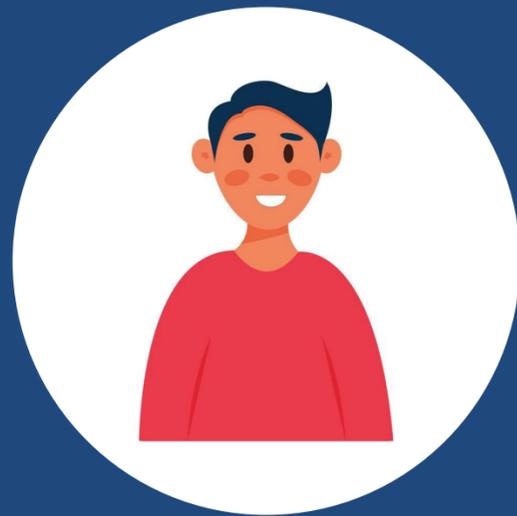
Meta Civil Engineer

(Interview conducted outside Sweet Maple)

Ethan's POV

We met...

Ethan, a **civil engineer** at Meta, who travels with his **15-20** person family.



We were surprised to notice...

that he was the **only** person taking charge in planning the group itinerary

We wonder if this means...

that people are too **lazy** to take on the **responsibility** of planning large family trips.

It would be game changing...

to **empower** others in the group to step up and **be confident** in their planning expertise.

HMW gather information in a safe, anonymous, and concise manner?



HMW make opinions easily shareable?

HMW make decision-making easier?

HMW make decision-making faster?



HMW give group travellers individualized time?



HMW make group travel more affordable?



HMW ease the process of booking events that caters to everyone?

HMW make destination choosing easier for big families?

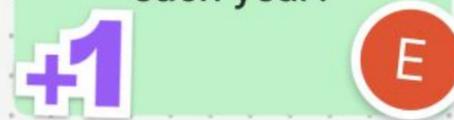
HMW plan and suggest age-appropriate activities?



HMW quickly pivot away from the planned itinerary?

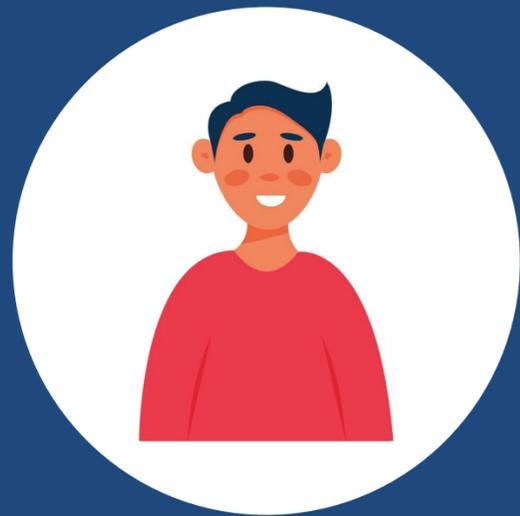


HMW find new activities for the same destination each year?



HMW ease transportation planning for such a large group?

How Might We



quickly pivot away from the planned itinerary?

Kahoot-style Yes/
No opinion making



Flight + hotel
recommendation
system based off
of liking/past trips

have a curated list
of activities they
might enjoy based
on past activities



Map pop up of all
recommended
locations in area

Create a backup
trip itinerary

Recommend
places around the
original site to visit

real-time
notifications for
bookings/
reservations that
open up



LLM
summarization of
travel plans

Work around
baseline
framework of
location + time,
then everything
else is modular



Automatically
suggest similar
options to those
already selected

LLM chatbot to
quickly "talk with"
your itinerary



find and use
another person's
planned itinerary



AirShare

– find and use previous itineraries



AirShare brings travelers into the history book of trip itineraries. Need an itinerary for Yosemite? Browse through the thousands of itineraries and pick your favorite (or let *AirShare* recommend you one!).



Key Assumption

People are much more willing to plan something if they have a reference guide. This will increase their responsibility in planning group trips.

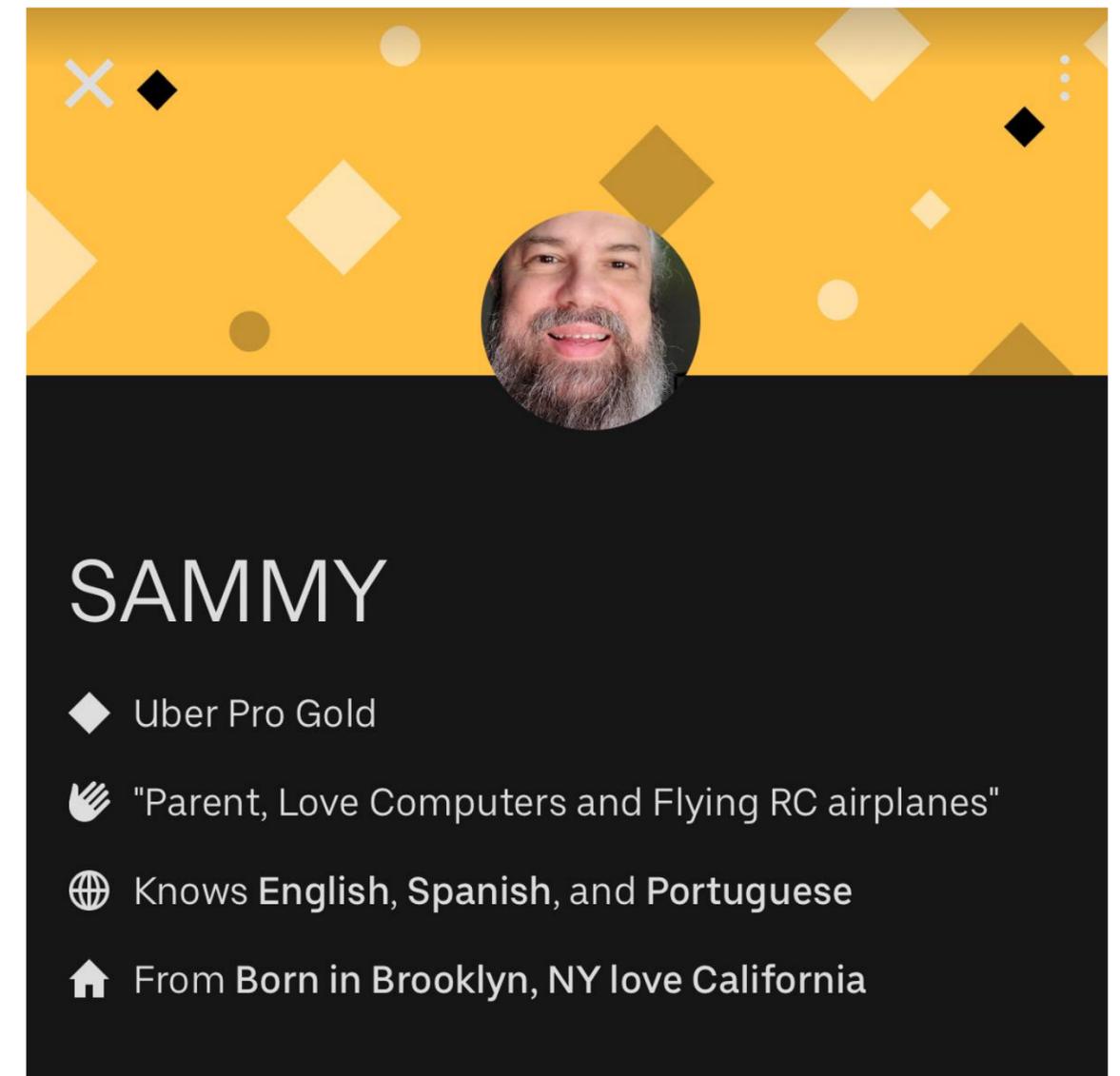
AirShare – Experience Prototype

Procedure

1. Ask about what method they like to go travel (plane, car, etc.)
2. Hypothesize:
“I will give you two options to choose from. Let me know which one you choose.

If you were to go to a brand new country/state, would you first take a look at:

- A. The bucket with past itineraries that travelers have already used
- B. The DIY bucket, do your own research and make your plan



AirShare – Key Insights



People **do not want** a reference guide. Following a reference guide **brings stress** to the trip.

“It would be the second [bucket] definitely because I’d never use the first one.”

*“Even for local outings, we always plan out of season. **I don’t follow the masses** .”*

*“If you follow everybody else, you’re always going to be stuck in lines. **Going with a plan also brings stress to the trip** .”*



02 Samantha

IR Major at Stanford

(Interview conducted outside Outdoor House)

Traveling as a single woman is hard

Word of mouth is an important influence on her decision making.

I like to use my iPhone Notes app to share plans because it seems less formal than a Google Doc

I love to screenshot when there is no wifi

Sometimes it does get lonely when traveling alone.

I ask my friends and people I can trust for recommendations

she is comfortable speaking Spanish, there is no language barrier

I trust my instinct.

Wants to have the flexibility of being able to move up her living situation when travelling - ex. group to single room in ho...

She will be going to travel with a non-Stanford study abroad next quarter.

SAYS

Reddit is a great place to get feedback on where to go

she can communicate her way through Spanish-speaking countries

Thinks about her peers' feelings when traveling — wants to check in with everyone

Being around strangers is fun

Traveling to destinations alone is safer when research is done

Using the notes app is less formal than using Google docs

it is good to have financial freedom in travelling

Official websites of places is most trustworthy

Group vibe is important before she plans out a trip

the way someone writes a reflection of a place is very important

THINKS

packs an extra day or two of food for trips

Eyes light up when she talks about Colombia

Uses sites like national park website or if out of country, their official tourism site for info.

Frequent/ experienced hiker and backpacker

Weighs her backpack load to make sure that she doesn't die

Makes sure she is eating well before a backpacking trip

checks in with group on how they are feeling overall

Does a LOT of research beforehand (checking national websites and calling)

Often takes the charge when group traveling

Tries to be flexible when backpacking, i.e if hostel doesn't work, she'll try to pivot to other alternative accommodations.

DOES

It is lonely to travel by herself

Likes the thrill of being lost - we are all human and she will find a way out

Feels Reddit is a more trustworthy site as their is a real person giving their opinion.

Well-prepared once enough research has been done

A close sense of community with those who hike and backpack on campus

does not like using formal apps for travel (ex. GDocs)

Likes to travel to Colombia and explore new places

trusts human opinions heavily

Reliant on existing friends/family from the travel destination for recommendations

That there are many concerns when traveling, but she trusts her instincts

money is very important in travel

responsible to lead the team because she is the most experienced

Hesitant to travel alone due to safety concerns

FEELS

I like to use my iPhone Notes app to share plans because it seems less formal than a Google Doc

SAYS

the way someone writes a reflection of a place is very important

THINKS

Does a LOT of research beforehand (checking national websites and calling)

DOES

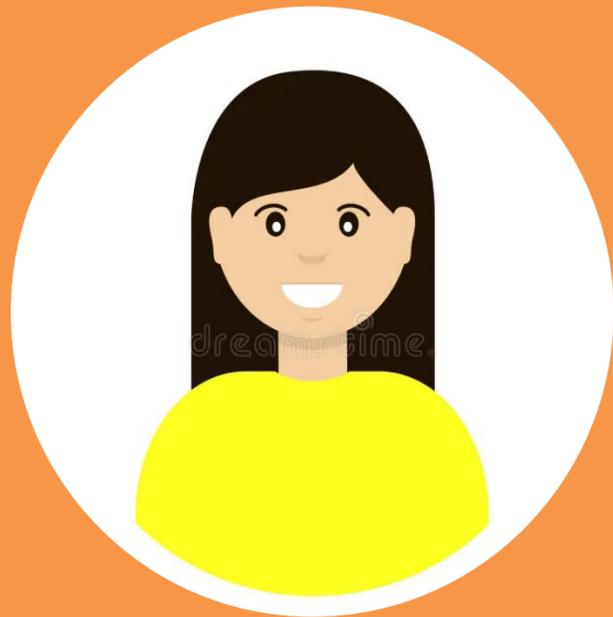
Hesitant to travel alone due to safety concerns

FEELS

Samantha's POV

We met...

Samantha, a junior at Stanford studying IR, who loves to **backpack, hike, and travel through hostels** either solo or in groups.



We were surprised to notice...

that she was more comfortable sharing her thoughts with the group through the iPhone's Notes app instead of Google Docs.

We wonder if this means...

that making decisions are less stressful on handy, easily accessible devices

It would be game changing...

to provide a comfortable, pleasant, and convenient setting to make individual decisions for group activities.



HMW make site
opinion searching
easier?



HMW help lonely
travellers find
community?

HMW make solo
travellers less
hesitant when
going abroad?



HMW help
travellers with
financial freedom?

HMW make group
alignment less
stressful?

HMW make
remove language
barrier for
everyone?

HMW make travel
more affordable?



HMW ensure the
safety of solo
female-identifying
travelers?



HMW consolidate
all national notices
and public
information?



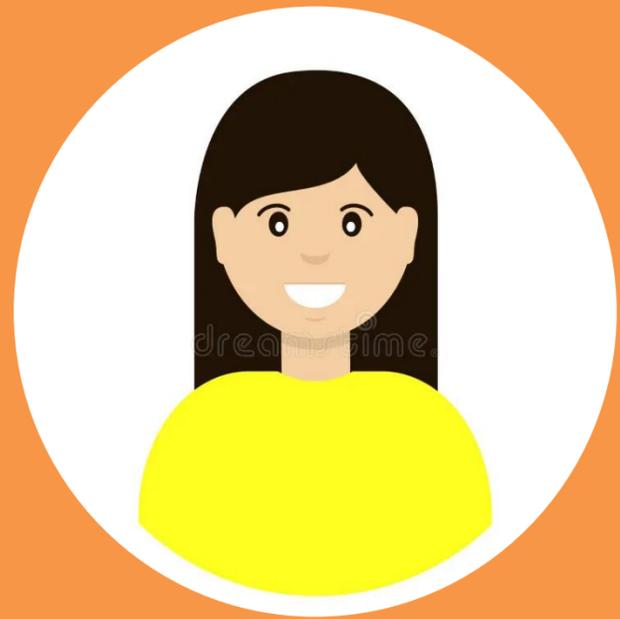
HMW solve the
issue of no internet
access and
connectivity when
travelling?



HMW crowd-
source travel
recommendations
from those in my
network?

HMW check in on
the emotions of
peers while
traveling together?





How Might We

solve the issue of no internet access and connectivity when traveling?

Save offline backup automatically (a la Google Docs Offline)



automatic sharing with travel buddies

Scheduled texts sent for each trip day



downloadable wallpaper image of itinerary



final plan can be saved as an image

travel with a local



always carry a hotspot around

GPS location tracker that is shareable with family

Map of dead-spots WiFi zones and auto-add/alert to places that have been added that are dead zones



find closest wifi spot nearby pre-downloaded map of cafes/libraries/hotels etc with wifi

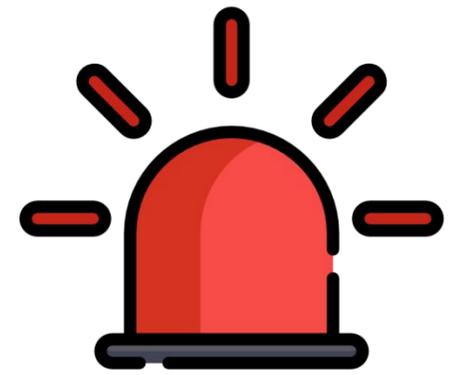


memorize itinerary

automatic messages sent to emergency contacts after x hours of no connectivity

Blindspots

– Stay ahead, stay online



Blindspots provides you with real-time maps and automatic alerts, so you'll know exactly where and when signal drops. Whether you're traveling, commuting, or just out and about, we've got your back—keeping you online and in the loop.

Key Assumption

Travelers experience frequent disruptions due to unexpected WiFi dead zones. By having a map to locate these offline-zones, travelers can plan accordingly and feel more prepared.

Blindspots — Experience Prototype

Introduction

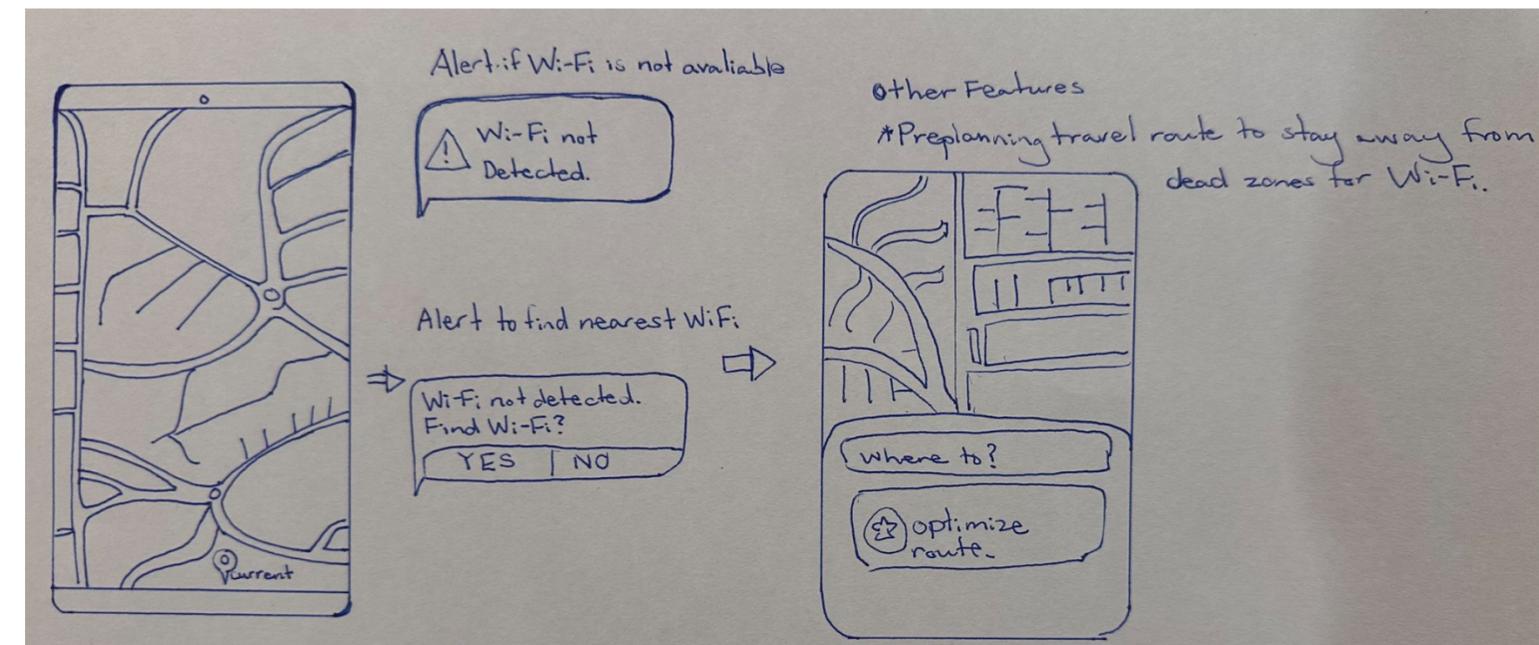
"Blindspots has two ways of keeping you informed about signal drops. I'll explain both, and then we'll walk through an example of how you might use it."

- **Option A: Automatic Alerts**
Blindspots sends notifications when you enter low-signal areas to help you avoid unexpected disconnections.
- **Option B: Manual Map Check**
Set a destination, and the map will optimize your route along Wi-Fi accessible areas instead of sending notifications.

Next

Handed interviewee a **paper map** of with marked weak signal areas. Used this to simulate the experience:

- **For Option A:**
You'll "trigger" notifications (using a paper pop-up or card) as they travel into low-signal zones.
- **For Option B:**
Ask them to set a predetermined destination on the map, and then review the Wi-Fi accessible paths available.



Blindspots – Key Insights

Users are keen on the feature that optimizes routes along Wi-Fi accessible paths, especially in settings with signal drops, and are **less keen** on frequent notifications.

“I love the idea of finding routes with Wi-Fi hotspots; it would make my travels so much easier, especially in areas where I know the signal can drop.”

“I don’t want to be bombarded with notifications. If I can just check a map that shows me the best paths, that’s all I really need.”

“When I’m in a new area, knowing where the Wi-Fi hotspots are would help me a lot more than getting pinged every time I hit a weak signal.”



03 Jensen

Technology Specialist from China

(Interview conducted outside Stanford Bookstore)

"This [conflict] is ok because we are close enough to share them openly, otherwise we would not be ok with it"

Disagreements happen usually on smaller details

I am very organized when it comes to trip [planning]

"AI could solve this"

If it's a family bonding, then definitely I will think about my family's priority.

For me, we will create a group chat and share our ideas, opinions, plannings, Airbnbs, hotels

Some people tend to keep to their schedule, but others are more creative." - Differing personality types (structured vs. spontaneous)

If I'm traveling with my friend, I mean, keep those opinions inside.

"I think this happens because we are close enough to each other to express our concerns." - Being with family allows for open and honest communication when conflicts arise.

"If it makes your life easier... I'm totally fine [giving up data]." openness to data sharing if it leads to more convenience

SAYS

Data privacy is not a concern for him

Cost and activities are top priorities

A solution that integrates all planning tools—accommodation, itinerary, activities, food—into a single platform would simplify group decision-making.

AI tools could play a significant role in offering suggestions for flights, hotels, activities, and food based on the user's travel history, preferences.

Thinks travel planning tools need more personalization not just in terms of activities but also accounting for individual and family preferences

Thinks group chats are less than ideal as it can create delays in planning due to slow responses.

When planning travel, family's needs and comfort, especially for older relatives, come before his own desires.

Travel tools should take accommodations into account, offering recommendations for nearby activities, restaurants, and events to where they are staying.

small details cause the most friction, i.e. food perferen...

He knows that when traveling with family, small arguments about what to do or when to rest will happen.

THINKS

Check immediate vicinity of hotel booking for attractions and food

Travel 2-3 times a year (mostly for holidays)

Plans travel for parents due to language barrier.

Is a purpose oriented traveler.

Uses a bunch of different platforms to plan: Google Docs, groupchats, Notes, Excel

Has tried to use ChatGPT to plan out iternary (did not work)

Plans events closer to hotel, so that it is easier to walk and not have to worry about transportation in a foreign place.

Rather than following a strict itinerary, he likes to leave room for spontaneous decisions during trips

Find it easier to plan solo travel

Use reviews and recommendations: Relies heavily on online reviews and recommendations from friends when choosing where to stay or eat

DOES

Feels that he is willing to sacrifice data privacy for sake of easier place to consolidate plans

Flight and accommodations are most important aspect after planning out date and location.

Openness to more pre-configured tools that allow travelers to avoid building plans from scratch, with templates or suggestions based on prior trips or preferences.

Harder to voice frustrations with friends as opposed to family.

There's a need for more streamlined solutions to manage travel decisions as a group.

There's interest in using AI for travel planning, but current solutions (like ChatGPT) are seen as insufficiently personalized.

Planning trips with family often involves accommodating different needs and preferences, particularly when it comes to rest, activities, and mobility issues (e.g., for elderly parents).

When planning, major considerations (flights and accommodation), followed by what's nearby, like restaurants or tourist attractions. Location is key for convenience, minimizing the need for transport like Uber.

Older generations rely more on others (like their children) for travel planning due to language barriers or less familiarity with digital tools.

Group chats and informal tools are used, but they are seen as disorganized or inefficient.

FEELS

Some people tend to keep to their schedule, but others are more creative.” - Differing personality types (structured vs. spontaneous)

SAYS

A solution that integrates all planning tools—accommodation, itinerary, activities, food—into a single platform would simplify group decision-making.

THINKS

Use reviews and recommendations: Relies heavily on online reviews and recommendations from friends when choosing where to stay or eat

DOES

Openness to more pre-configured tools that allow travelers to avoid building plans from scratch, with templates or suggestions based on prior trips or preferences.

FEELS

Jensen's POV

We met...

Jensen, a technology specialist from China.



We were surprised to notice...

He struggled with aligning different platforms he used to plan: texting, Google Docs, excel, etc.

We wonder if this means...

Despite his role as a tech strategist, he still struggles to plan trips and feels overloaded by all the information presented to him across multiple platforms.

It would be game changing...

To empower others in the group to step up and be confident in their planning expertise.



HMW consolidate
a bunch of
different platforms
together?



HMW make it
easier for families
to travel?

HMW streamline
the process of
travel planning?

HMW make people
respond quicker?



HMW personalize
trips?

HMW cater trips to
everyone in the
group?

HMW relieve the
gender pressure in
planning?



HMW drive
consensus?



HMW get a trip out
of the groupchat?



HMW make trip
planning FUN?



HMW make trip
planning
collaborative?

HMW reduce
tensions between
people who
disagree at the
planning stage?



How Might We

Create a one-stop hub for trip planning that streamlines resources, reducing overwhelm and information overload.

API calls and integrations of other services (Maps, Yelp)



Text notifications

platform that scrapes all data

automatic trip generator based off of purpose of trip



All-in-one travel dictionary with booking tips, prices, etc.



In-house search of places and recommendations to go

direct group chat service in app

text a local directly in app



everyone collaborates to drop pins on a map



Anonymous voting system



TripBytes – all in one trip planner



TripBytes is your all-in-one travel planning hub, eliminating the need to juggle between Google Docs, maps, and scattered resources. Plan your entire trip in one place all without leaving the platform.

Key Assumption

Trip planning can be overwhelming and stressful; by providing information in a digestible and centralized manner will improve user experience and reduce complexity often associated with trip planning.

TripBytes

– Experience Prototype

Introduction

- *“Imagine you’re going on a trip next month and you want to start planning it. TripBytes will automatically generate a full itinerary for you, just tell it what you want and where you want.”*

Next

- *Put participant in a chat with Emily, simulating a conversation with an AI. User provides a set of parameters about his upcoming trip. A trip itinerary is generated based on those preferences.*
 - Participant gives feedback on itinerary and asks to tweak it.*
- *Ask about experience:*
 - Do you like this automatically generated itinerary?*
 - How did this make you feel about the trip planning process?*
 - Would you prefer to do it yourself or have a generated itinerary?*

Hi! Welcome to TripBytes. Tell me about the details of your trip and I can generate an itinerary for you.

Hi! Me and my girlfriend are planning a trip to Japan soon. Can you help me plan an itinerary?

Sure! Can you give me a little bit more information, like the length of your trip or activities you want to include?

We are going for 3 weeks and we want to see as many tourists spots as possible. Specifically we really want to eat omakase and drive jdm cars.

Here’s a three-week Japan itinerary focused on exploring top tourist spots, enjoying omakase, and driving JDM cars!

TripBytes – Experience Prototype

Thank you! But I do not have that much money to eat that much omakase. Can you give me a more budget friendly itinerary?

Thank you! We would like to more time in Tokyo. Can you adjust the itinerary for this?

We want to visit the cherry blossoms. Can you add this in?

TripBytes – Key Insights

People **do not think** an automatically generated itinerary is that helpful. Oftentimes, the automatically generated itineraries are not individualized enough or feasible.

“It takes the same amount of time to find someone else’s itinerary online and improve that. In fact, in that process you can learn more about the culture and city”

“Part of traveling is learning about the culture and context, which you can learn while planning yourself.”

“It would be more helpful to ask the AI agent, in the moment, for backup options if my personal itinerary isn’t going as planned.”

Solutions Recap

AirShare

Issue: People are overwhelmed with choices when planning trips and want a baseline reference.

Blindspots

Issue: People traveling abroad often have limited Internet and data access, especially during outdoorsy trips.

TripBytes

Issue: People have issues coordinating trip plans across different platforms and struggle to “get plans out of the group chat”

Solutions Recap

AirShare

***Customizable
itinerary
repository.***

Blindspots

***Smart routing
to preserve
Internet
access.***

TripBytes

***All-in-one AI
powered
itinerary
generation.***

Combination Solution

Interactive travel planning app that pulls from a repository of existing itineraries and has built-in safety features for outdoors travel, and allows for groups of people to plan together.

Key

Features

- A “journey map” that has the basic things: location, length of trip, weather, and activities.
- Can use someone else’s trip itinerary that they’ve uploaded or use it as a template
- Anonymized voting for each possible activity/location
- Automatic offline map generated after each trip is planned showing wifi outage areas as well as nearest wifi sources.

Combination Solution: Ethics

What are the ethical implications?

Any app-based solution using mobile technology, and particularly text messaging, has the potential to be used in a way that is not intended by the developer.

The usage of an app-based solution by a certain cohort of users may result in a certain degree of risk to the user.

It elides the joy of travel.

Further, female users may be at a higher risk of harassment.

Who does it serve?

People who are young, male, and have people with the means to travel.

Who might it leave behind?

Older people, people who are not familiar with modern technology, and people who do not have the means to travel. Services would be less accessible to these groups.



People who are not familiar with mobile technology, and particularly text messaging, may be at a higher risk of harassment.

The app-based solution prioritizes a certain cohort of users who may not come from a diverse background.

Traveling abroad.

Applications, particularly those that use text messaging, may be less accessible to these groups.

These groups are not generally the primary users of these services and may not provide tourism services to these groups.

Combination Solution: Ethics

Ethical Implications:

- We don't need more app-based solutions. Apps are walled gardens that monopolize data.
- The itinerary dataset is skewed towards people who travel a lot, usually richer/whiter people.
- People feel as though their lives are "too dictated by the algorithm."
- Female travelers are at heightened risk while abroad.

Who does it **serve**?

- People with money
- People who are familiar with using modern technology and mobile phones

Who might it **leave out**?

- Old people
- Recently released prisoners
- Tourism agencies
- People who don't have the money to travel
- People who are offline

Combination Solution: Ethics

LANGDON WINNER

Do Artifacts Have Politics?

Newsletters

The Atlantic

TECHNOLOGY

The Cathedral of Computation

We're not living in an algorithmic culture so much as a computational theocracy.

By Ian Bogost

According to a Women's Safety Survey commissioned by AIG Travel:

45% of female travelers feel less safe or much less safe about traveling than they did five years ago.

84% reported that their employers either did not provide travel safety tips/resources or that they weren't aware of any such tools.

63% of women think about safety always or frequently while traveling.

The top four risks that women consider before or during a trip center on theft and scams, such as pickpocketing/purse snatching (93%), credit card fraud (86%), identity theft (63%), and taxi scams (62%).

The top two actions that women take with a goal of increasing their personal safety before or during a trip are sharing an itinerary with a friend or family member (93%) and purchasing travel insurance, emergency travel medical coverage, and/or emergency travel evacuation coverage (87%).

many years. Furthermore, personal computers are no longer "universal machines": their possibilities are limited by their assigned interfaces and programs so that they function only as the terminus of digital capitalism. This is justified as "user-friendliness": anyone who uses a computer for reasons outside of research, development and production today is no longer supposed to understand what is going on in the device, and is instead made dependent on digital services. As with most productive forces within capitalism, the development of the computer is characterized by the fact that in dealing with them, the user does not learn any of the skills proper to the productive force. On the contrary, we find ourselves in a situation in which the widespread usability of computers is paired with an extensive digital illiteracy. Technological progress has become a source of social regression; the culturally pessimistic suspicion that smarter phones require ever dumber people is not that far-fetched.

Getting Over It
video
1/2

DUDES BE LIKE

Business of Breakfast Cereal
1.4M views · 2 years ago

11:16

Can You Swim in Shado...
11:16

"I don't watch TV, I'm not gonna let the mainstream media tell me how to think"

Why Airlines Don't Make Money Flying
Airlines Quietly Became B...
Productions · 3.1M views

Training: User logs (Engagement behaviors, Satisfaction behaviors)

Serving: Ranking score (Weighted Combination)

User Engagement Objectives: Logit for Sigmoid, Sigmoid

User Satisfaction Obj: Sigmoid, Sigmoid

Embedding Space: "shrimp fried rice", "chicken fried rice", "fried chicken", "chicken and waffle", "burgers"

Multi-task Learning

my brother in christ
you let determine your whole personality

recommendation_watchnext.serve()

Input Feat

@i_work_in_tech

Ethics Additional Reading

LANGDON WINNER

Do Artifacts Have Politics?

Newsletters

The Atlantic

TECHNOLOGY

The Cathedral of Computation

We're not living in an algorithmic culture so much as a computational theocracy.

By Ian Bogost

Study Finds Women Feel Less Safe About Traveling Than They Did Five Years Ago

05/15/2018

Friends of the Classless Society

CONTOURS
OF THE
WORLD
COMMUNE



Thank you!

