

If your life was a TV show  
what would the **theme song** be?

*Answer in  
the chat!*



Fall 2023

# Interactive Data Storytelling



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## 02. Audience

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# Tonight's Objectives

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- Assignment 1 Review
- User Research
-  Interview Practice
-  Personas
- Designing with Empathy

# Assignment 1 – Recap



Breakout Rooms

# Assignment 1

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- Share:
  1. What was the experience? Show example.
  2. What resonated with you? What made it memorable?
  3. What are the design elements that made the experience effective? For example, consider the visual language, tone, pace, or terminology.
- Feedback/Response:
  - Does this example resonate with you?
  - Is there an element you might explore in your work?

How can we design for the ways  
people enjoy and understand?



# Visual Storytelling II

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# Understanding the Audience

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- **First step** in design/storytelling is to gather an understanding of the intended audience.
- **Who are you designing for?**
- How do you motivate them?
- How can you guide your design decisions to most effectively engage with the audience?



# Understanding Audience through Research

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# Assumptions

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- An **assumption** is something we take on faith or as a best guess despite a lack of proof.
- We can't know everything about users or their environment before starting a project, so some assumptions are usually necessary.
- The danger with assumptions is that they are often treated the same as facts later in the project, when team members forget that the assumptions have a shaky base.

# Types of User Research

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## Approach 1

- Asking questions directly of your users or stakeholders
- Surveys to indirectly gather answers
- Creative probes to invite insights

What people tell you may differ from reality.

# Interviews

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- A user interview is a research method during which a **researcher asks a user questions about a topic of interest** (e.g., use of a system, pain points in workflow, behaviors) with the goal of learning more about the user to inform design.
- Typically done one interview at a time
- Can be conducted before (to inform personas), during (feature testing), and after (usability test).
- Focused on understanding *their* perspective

# Surveys

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- **Survey** to question a population. Questions can be around the features they use, experience with features. Typically a large sample size. Types: Diary studies (at the same time), System Usability Score (same questions to depict score on beginning/end).
- Data Stories: Gauge understanding of subject matter and test the experience.
- Can be conducted before (to gauge baseline understanding of subject matter/), during (feature testing), and after (usability testing).

## Approach 2

- Fly-on-the-wall observation





### Approach 3

- Contextual inquiry
- “Show me how it works.”



# Contextual Interviews or Day In The Life

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- Contextual inquiry is a type of field study that involves **in-depth observation** and interviews of a small sample of users to gain a robust understanding of work practices and behaviors.
- Best in early discovery phases to gain a general understanding of user processes.





## Approach 4

- Try it yourself
- Ethnographic research (or research with an ethnographic approach)

**Who has conducted  
interviews before?**

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# User Interview Tips

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- Set a goal beforehand: a concise, concrete goal related to a specific aspect of the users' behavior or attitude.
- Make the user feel as comfortable as possible. Create a rapport with the user.
- Prepare questions before the interview.
- Write dialog-provoking interview questions. Be prepared to ask follow-up questions on relevant topics.
- Avoid leading, closed, or vague questions.

# User Interview Tips

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- Interview people one at a time (not in groups) and don't overwhelm them with team members (one interviewer and one note taker is usually sufficient).
- Focus on understanding *their* perspective (do not correct them).
- **Superpower Tip:** Get comfortable with a little bit of awkward silence (5 seconds or so), don't feel compelled to fill the silence.

# Sample Interview Introduction

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Hi \_\_\_\_\_, thanks for taking the time today to chat today. I am writing a data story about [\_\_\_\_] for a class. I would like to learn more about your understanding and response to the topic. The session should take about [X minutes]. I'll be recording the session to refer back to it while I sketch out the story.

Any questions? Great. Let's begin.

# Sample Interview Questions

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## Overview

- Where are you based? What is your job?
- What is your day-to-day like?
- What's the biggest challenge of your day?

## Response to Subject Matter

- How familiar are you with how recycling works?
- How do you feel about recycling?
- What is your approach to trash and recycling?
- Where do you learn about recycling?

# Sample Interview Questions

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## Response to Persuasive Material

- What excites you about storytelling?
- What motivates you to take action? Can you give an example?
- How do you best understand data?
- How do you consume news/information?
- What's a go-to news source? What do you like about it?
- Where do you draw inspiration?





# In-Class Challenge – Roadmap

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Assignment: Persuade two personas (millennials, boss, policymaker, children) on the impact of recycling.

1. Interview Prep
2. Interview
3. Interview Reflection
4. Persona Development

# Challenge – Interview Prep

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- After learning who your interviewee will be, take 2 minutes to prepare for the interview.
- Script your introduction.
- Write down questions you may ask.

# Interview Rooms

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# Challenge – Interview

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- Take 10 minutes to interview then switch.
- Ask to record and/or take notes to refer back to.

# Challenge – Interview Reflection

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- Take 2 minutes to reflect on the interview.
- How would you design for them?
- How would you motivate/inspire them?

**Break time: Return at 9:02**

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# Interviewing takeaways?

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# Personas

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- A persona is a **fictional, yet realistic, description of a typical or intended user of a product or experience.**
- Details the persona's needs, behaviors, and goals, as well potential demographics, eg region, age or occupation.
- There may be more than one persona for a product but identify a primary persona to ward off designing for edge cases.



# Personas

- Personas fosters empathy for the specific users we are designing for, and helps us break away from the attempt to design for everyone.



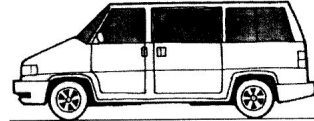
#### Alessandro's goals

- Go fast
- Have fun



#### Marge's goals

- Be safe
- Be comfortable



#### Dale's goals

- Haul big loads
- Be reliable



**Figure 5-2:** A simplified example of how personas are useful. By designing different cars for different people with different specific goals, we are able to create designs that other people with similar needs to our target drivers also find satisfying. The same holds true for the design of digital products and software.

# Personas – Examples

Kady Woods

“Watching something you stressed out about for 2 years come to life in 3D is pretty amazing.”



## Engineer Ed: Civil Engineer

Ed is a civil engineer for private consulting firm based in Boston, MA. He lives in a house outside of the city with his wife and works from home for most of the week, designing better infrastructure for nearby cities. In his free time he keeps up with yard work, plays with his pets, and meets friends for board game nights once a week. His firm has a great company culture, and he's very happy there and has been there for 5 years.

### Demographics

- 30-45 years old
- \$70,000/yr income

### Worklife

Spends most of the day designing in AutoCAD, talking to contractors and other team members about the changing needs of the project as new things are discovered about the worksites.

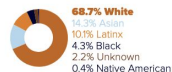
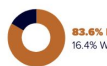
#### Challenges

- Incorrect initial data can lead to hours of wasted work
- Poor communication between team members
- Hefty programs and file sizes can cause machine to crash

#### Opportunities

- Ed's work is very visual, and therefore he is open to visual storytelling as a way to convey information
- The creation of a system of a visual legend helps people at all levels in the team understand the information better

### General Statistics - Civil Engineers in the US



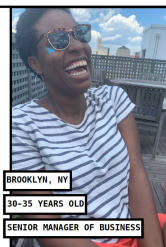
Based on interview with civil engineer Craig Bettsold and <https://www.zippia.com/civil-engineer-jobs/demographics/>

## SENIOR MANAGER MAYA

A Senior Manager of Solutions and Opportunities with Disney CreativeWorks, building processes, and creative solutions across the Travel and Retail categories. She is a dedicated media professional. Her work in brand partnerships and business development has afforded her the opportunity to travel the world, digesting how consumers interact with content in different ecosystems and develop strategic insights to help push a business forward. She is a passionate and curious media buff with particular interest in documentaries and screenwriting.

She is also deeply interested in equity in education and economic mobility for underrepresented communities and spends much of her free time serving and volunteering in spaces that serve such populations. She is committed to sharing as much information with as many people as she can.

MAYA WILLIAMS



BROOKLYN, NY

30-35 YEARS OLD

SENIOR MANAGER OF BUSINESS

#### Day-to-day Schedule:

- Wake up with coffee
- Meditative moment (8-15 minutes to focus energy and spirit)
- 9am-12pm; work independently because most of her team is LA-based
- 12pm-6pm; meetings and strategy sessions/planning for projects.

#### Screen Time to People Time Balance:

- 20% of day is talking to people in person; 30% is via screen
- The rest of her day is primarily computer time

#### Literature and TV/Movie Preferences:

- Trades – Ad Age and Ad Week
- Media and entertainment– Variety, Hollywood Reporter
- Memoir, non-fiction/observational, a survey of what's happened + perspective, essays
- Fiction that is sci-fi, other worldly, thinking beyond constraints of reality

#### Opportunities:

- Looking for something easily digestible, doesn't need to be particularly impactful
- Something catchy
- Motivated by competition

#### Frustrations/Challenges:

- Hard to bring new ideas to a team that has been there for a long time.
- Attention span-wants information to be delivered quickly
- Over-burdened with meetings already- doesn't want to spend much time having to learn what a visualization is saying

#### Design Consideration:

- Simple format
- Possibly interactive
- Short form
- Typically receives information via email or Instagram/Twitter



## The Professional

### Roles Could Include:

Employee in Professional Setting, Entrepreneur, Student, Salesperson

### Familiarity with Storytelling:

Uses it in presentations and communication without necessarily identifying it as 'storytelling'

### Tone:

Formal, professional, and concise

### Mental Model:

Added pressure for success since livelihood is usually at stake to some degree

### About Me:

As a 'professional', my objective is to communicate my work to my peers and superiors in order to drive some sort of action or decision. This is something I have to do on a regular basis, and oftentimes I'm conveying the same type of information to the same audience using the same format. I usually don't have a lot of time to refine and craft the story I'm trying to tell, and I am primarily sharing quantitative information. The most common structures I use to communicate to my audience are either in-person narration over some sort of visual aid like a document or slide deck, or by asynchronously sending a message to the audience.

### Challenges:

- Audience can have a lot of demands on their time and not give full attention
- Audience could be disengaged either because the content is 'dry' or they assume that they already understand the subject
- Presentations tend to be interactive, so it is common to get sidetracked before completing the full narrative
- Building empathy and telling engaging stories tend to involve more time and detail, where business tends to prioritize succinctness and efficiency

### Opportunities:

- Introduce more entertainment value to presentations to increase audience engagement while still providing them the relevant information

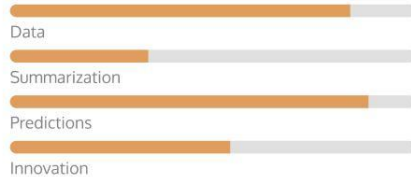
# Personas

## INVESTMENT ANALYST



An investment analyst is a financial professional with expertise in evaluating financial and investment information, typically for the purpose of making buy, sell and hold recommendations for securities.

### MOTIVATIONS



### WHAT ARE THEY TRYING TO ACHIEVE

Find patterns in macroeconomic industry trends

Analyze companies in sector to predict winners/losers

Find new companies to invest in

Communicate ideas to portfolio managers

Make recommendation on buy/sell

### WHAT ARE THEIR CHALLENGES

Lots of information/data to parse

Need to trust the data and test it against historical averages

Need to new data sources that are accurate

### THEY WANT TO

Propose recommendations to Portfolio Manager

Make thesis on sector and companies recommendations

Research new opportunities against various datasets

# Quantitative Data in Personas



## DATA SCIENTISTS

[View in Context](#) | [More Details](#)

Customer Success Engineer, Sr Director of Platform Operations, Sr Account Manager, VP of Media + Data Strategy

SMB

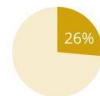
Agency

*"Since we can't touch or access any type of PII data, we use you guys. Our clients do have to upload directly into your platform."*

## ABOUT DATA SCIENTISTS

These users spend most of their time on the Sell Data pages, checking on the distribution status of their segments, sharing segments to social destinations, batch uploading, and enabling / disabling / editing their segments, and distributing data on behalf of clients. Users within this group also spend a significant amount of time on the Buy Data page to view their segments in the marketplace and compare against those belonging to other providers.

From an analytics point of view, this cluster of users were identified by their top used page being the Sell Data pages, including the Batch Upload.



USERS IN PERSONA

## ANALYTICS PAGE + FEATURE DATA

Averages calculated per week for the 67 users in this persona using Pendo Analytics data.

PAGES	% OF TIME PER PAGE	FEATURES	% OF CLICKS PER FEATURE
Analytics Environment	29.367010	Left Navigation Bar > Manage > "Analytics Environment" Menu Item	20.513117
My Audiences	16.257409	Create New Audience Button	3.930448
Advanced Audience Builder	5.716331	Admin Center > Primary Tenant Users > Create User	2.083881
Measurement Report	4.731253	My Audiences > Search Box	0.869403
My Taxonomies (US)	4.213356	My Taxonomies > Create New Taxonomy Button	0.231940
User Center - Users	3.119403	Audience Builder > Lookalike Button	0.045522
Audience Builder (US)	2.942239	My Audiences > Footer > Permission Button	0.030597
Profiling	0.588806	My Audiences > Footer > Distribute Button	0.027239
Notification	0.571642	Audience Builder > Save Button	0.024627
Audience Insights	0.414925	My Audience > Distribution Management > Confirm	0.007463
Taxonomy Builder	0.253731	Audience Builder > Lookalike Save Popup > Save Button	0.000000
Datasets	0.243284	Permissions Tracking > Permissions Table > List Item (View)	0.000000

## RESPONSIBILITIES

- Monetize offline data assets in LiveRamp
- Promote data in order to get more sales
- Onboard various data assets to as many platforms as possible
- Deliver audiences to the endpoints
- Find new buyers
- Create data products and one-pagers to promote these for Marketing and Sales
- Communicate with and onboard clients

## /L TASKS

- Sell Data in Data Marketplace, enable /disable segments, and re-upload segments
- Distribute segments, activate an audience, and check distribution status
- Search for and purchase data marketplace segments

## PAIN POINTS

With /L

- Hard to troubleshoot upload errors
- Reach fields sometimes show 0 / null which dissuades potential buyers
- Cannot click share data button w/o monitor
- Limited operators an inability to combine audiences when building custom segments
- Uploading files with blocked advertisers

# Assignment 2 – Developing personas from user research

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- Conduct two additional interviews with real people represented to build two personas representing different segments – millennial, policy maker, kids, etc. – to **persuade them on the impact of proper recycling** (in Assignment 3).
- The persona should contain:
  - Persona Name/Description
  - What are they trying to achieve?
  - What are their challenges?
  - What are the opportunities?

# Empathizing with the User

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- By building empathy – a deep understanding of the user you are designing for – **you can create better solutions.**
- Empathetic designs create more meaningful, desirable experiences and often can influence the user to act on your point-of-view.
- If a design is selfish or oblivious of user behaviors and feelings, it will be less effective.

# Medium

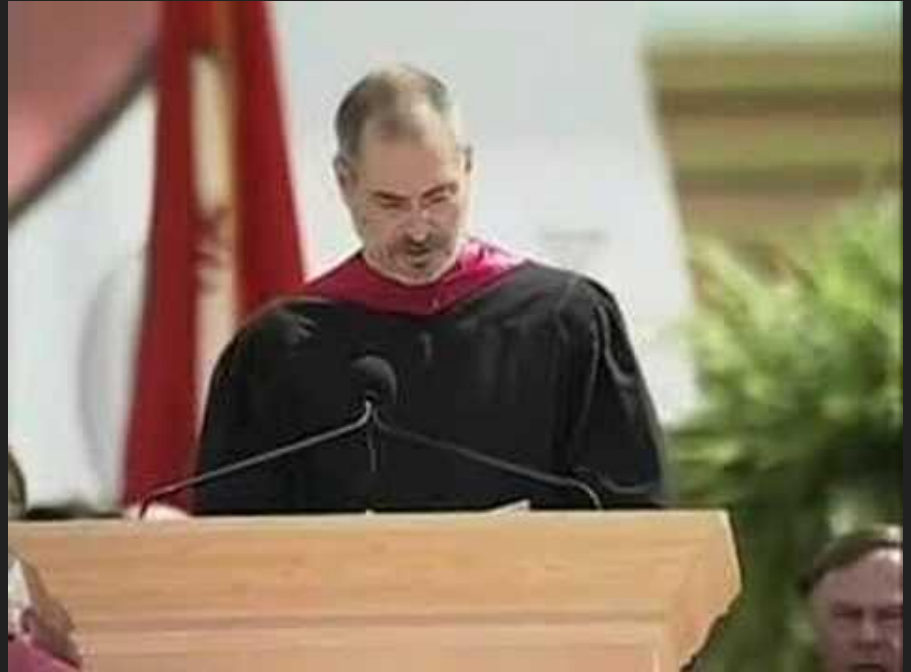
- Where/how is your audience consuming information?
- How to effectively deliver your message:
  - Video
  - PPT
  - In-person experience
  - Instagram Stories
  - Website



# Tone

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- The manner in which an author expresses their attitude
- The how/style.
- Deliver based on audience. When to use humor, universal references (TL;DR), or professional?
- In certain environments, eg PPT, we default to overly formal business language.
- Write/communicate like you speak to connect with your audience.





# Tone

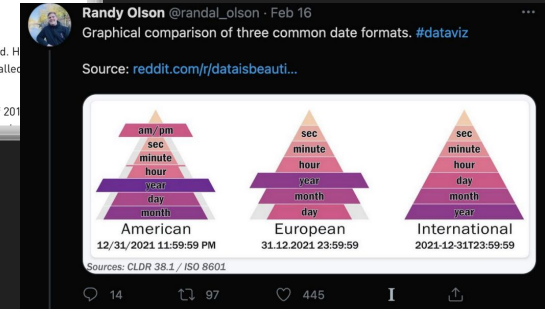
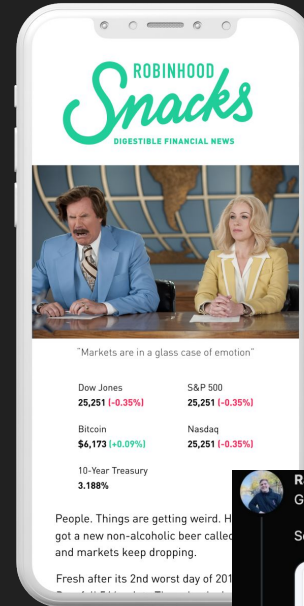
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- Col. Nicole Malachowski, USAF
- Thunderbird, USAF Air Demonstration Squadron



# Content – Terminology/Length

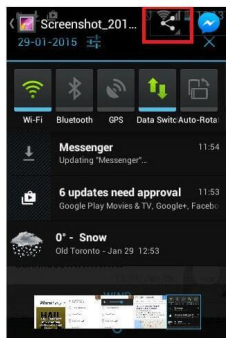
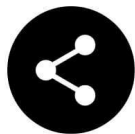
- Use appropriate terminology but stay away from jargon. User research to get to know appropriate terms!
- Length of text based on environment or motivations of the user.
- Consider localization – Appropriate date format or language (favorite vs favourite) based on region.



# Visuals – Universal Design

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- Reinforce universal design language and iconography. Reduce cognitive overload to help your audience interact efficiently, feel smart, continue on your journey.



# Designing with Empathy – Caveats

- Be cognizant about how your design can lighten cognitive load but not offend audiences with stereotypes. Test to decipher.



## Gendered Language in Teacher Reviews

This interactive chart lets you explore the words used to describe male and female teachers in about 14 million reviews from RateMyProfessor.com.

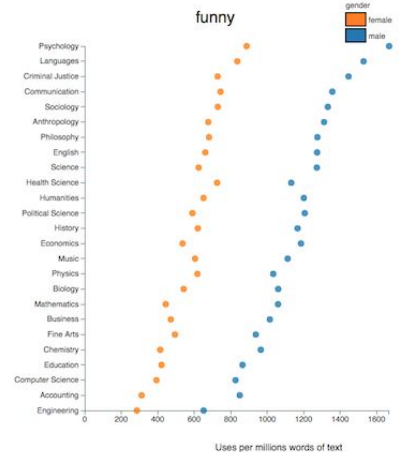
You can enter any other word (or two-word phrase) into the box below to see how it is split across gender and discipline: the x-axis gives how many times your term is used per million words of text (normalized against gender and field). You can also limit to just negative or positive reviews (based on the numeric ratings on the site). For some more background, see [here](#).

Not all words have gender splits, but a surprising number do. Even things like pronouns are used quite differently by gender.

Search term(s) (case-insensitive):  
use commas to aggregate multiple terms

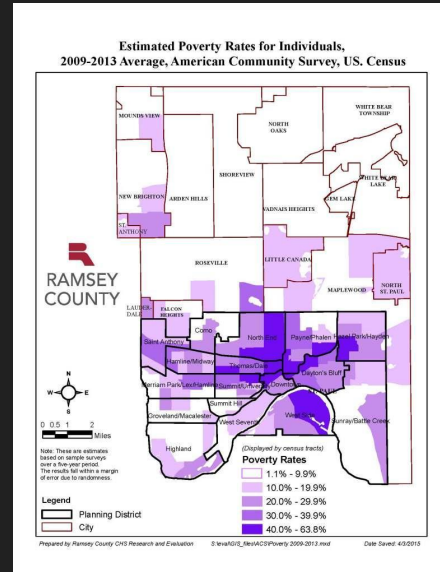
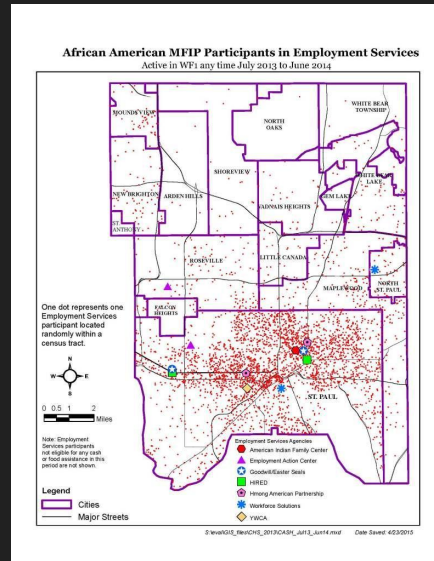
funny

All ratings Only positive Only negative



# Designing with Empathy – Caveats

- Consider how color or visualization choice may indicate sensitivities with individual location or overall perception.



# Coming Up

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- Storyboarding & Prototyping
- Figma Demo I

# Reading Assignment

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- Knafllic: Chapters 4 & 5