

# Housekeeping

asking questions on Slack!

(timely feedback/help is a scale problem)

# Housekeeping

block 11am (Tuesdays/Fridays) now!

several \*excellent\* visualization/hci researchers  
interviewing at WPI in Feb/March

# Reflections, week 1

cs582-17s / reflections Private

Unwatch 3

Star 0

Fork 46

<> Code

! Issues 0

**🔗 Pull requests 43**

📁 Projects 0

📖 Wiki

📶 Pulse

📊 Graphs

⚙ Settings

Filters 

is:pr is:open

Labels

Milestones

New pull request

<input type="checkbox"/>	<b>🔗 43 Open</b> ✓ 0 Closed	Author ▾	Labels ▾	Milestones ▾	Assignee ▾	Reviews ▾	Sort ▾
<input type="checkbox"/>	<b>🔗 Eddited Week 1 for submission</b> #43 opened an hour ago by Mistymush						
<input type="checkbox"/>	<b>🔗 Week 1 update</b> #42 opened 2 hours ago by agynessl						
<input type="checkbox"/>	<b>🔗 finish the week 1 reflection</b> #41 opened 3 hours ago by ZijunXu						
<input type="checkbox"/>	<b>🔗 Week1-Reflection-Xiaojun Wang</b> #40 opened 13 hours ago by biymon						
<input type="checkbox"/>	<b>🔗 Tiffany Vo Reflection 1</b> #39 opened 14 hours ago by ttranvo						
<input type="checkbox"/>	<b>🔗 Week 1 Reflection</b> #38 opened 14 hours ago by karansomaiah						
<input type="checkbox"/>	<b>🔗 First Reflection - Andrew Petit</b> #37 opened 15 hours ago by apetit2						
<input type="checkbox"/>	<b>🔗 Max Levine Week 1 Reflection</b> #36 opened 15 hours ago by mflevine						

# discussion

Step 1:

In pairs of rows, take turns discussing with your neighbors what you read and what you found interesting about it.

- 10 minutes

\* show and tell (with your computer) is encouraged

# discussion

Step 2:

For your team's selection:

Create an entry on Slack #general. Work to describe what the link was, and what was so great about it.

hint: use shift-enter to get a newline

hint: you can edit/delete posts if you make a mistake

- 5 minutes

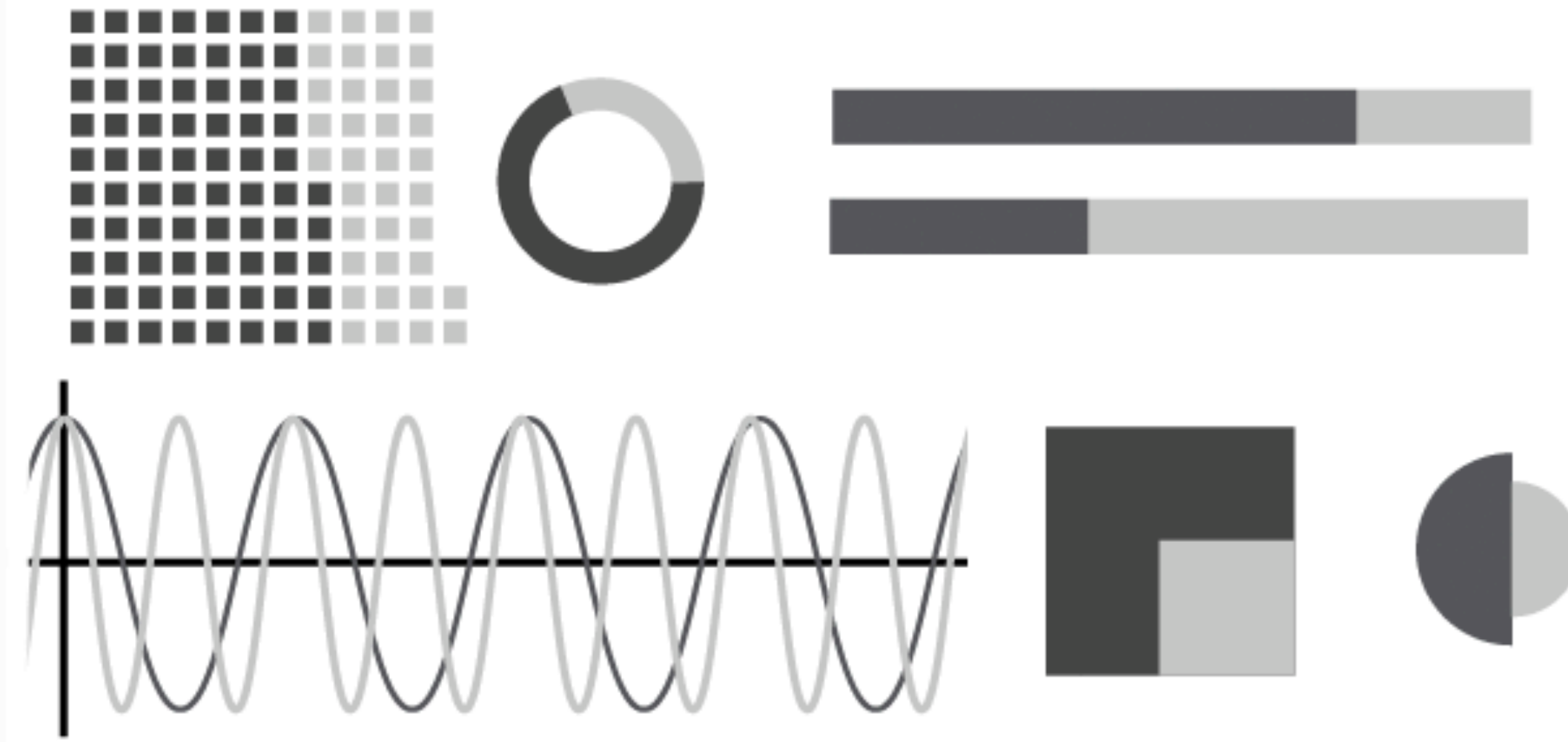




Task Abstraction



# The design space



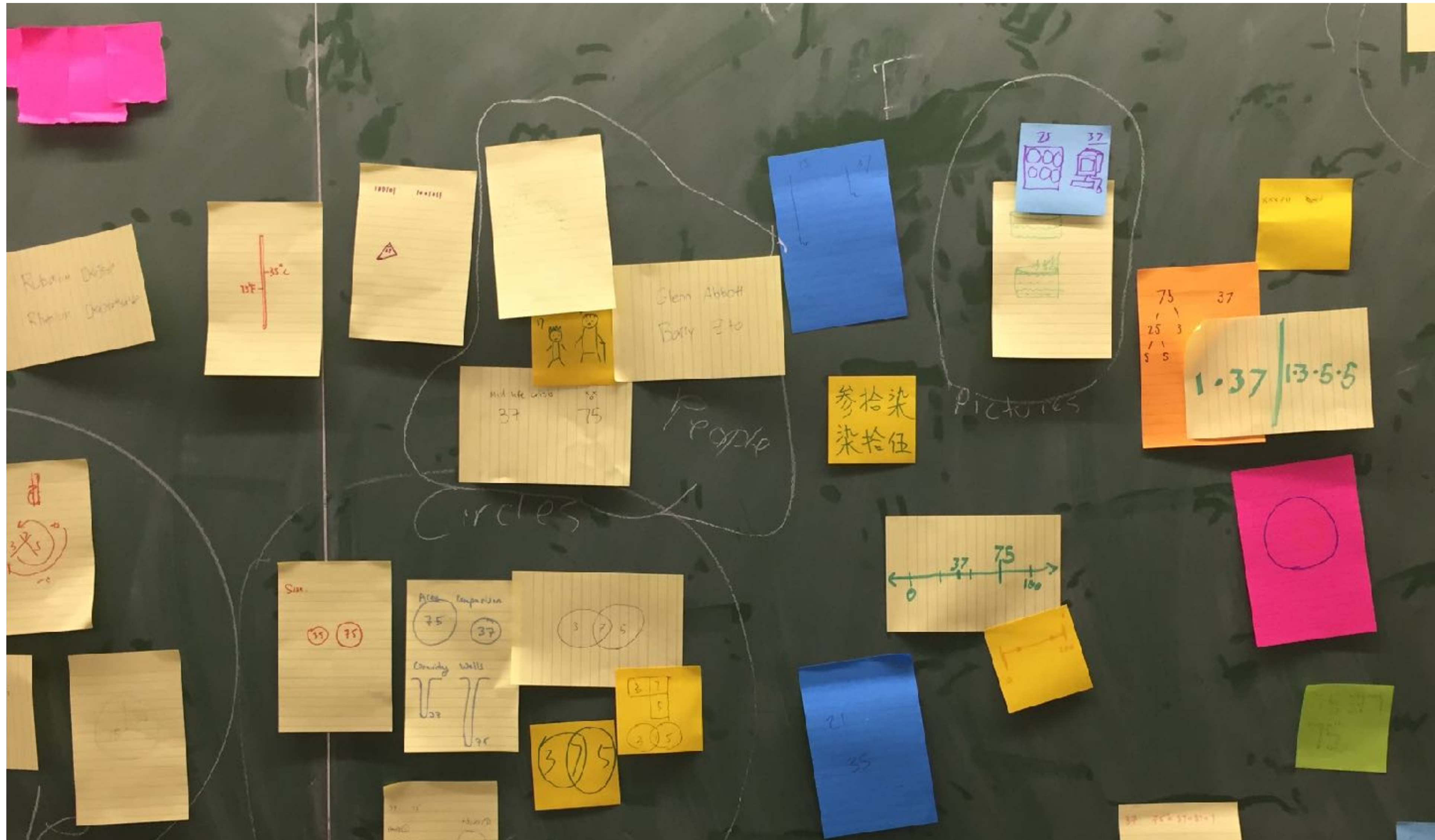
## 45 Ways to Communicate Two Quantities



Santiago Ortiz | July 27th, 2012

Back in 2010, I was giving a workshop on interactive data visualization in Lima, Perú, discussing whether a dataset has a unique or at least an ideal way to be visualized. For a simple data structure — a list of some

# Task abstraction & the design space

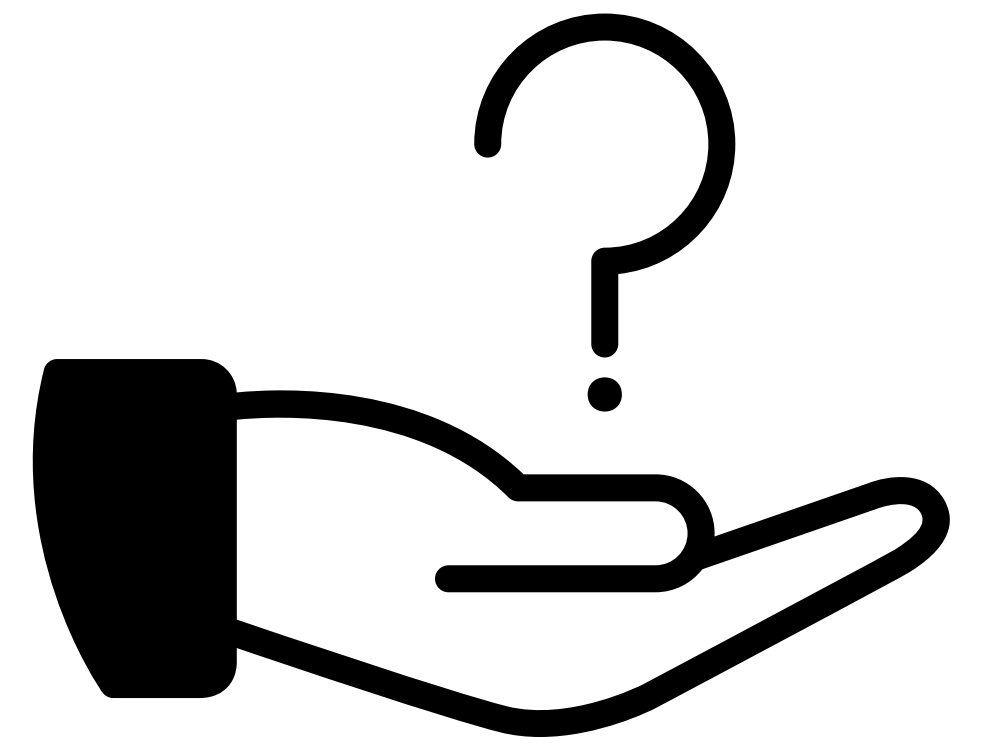




# Task abstraction: ask “why”

Any given visualization can be built for a variety of purposes.

Recall:  
exploratory and expository vis





# Case: the CDC

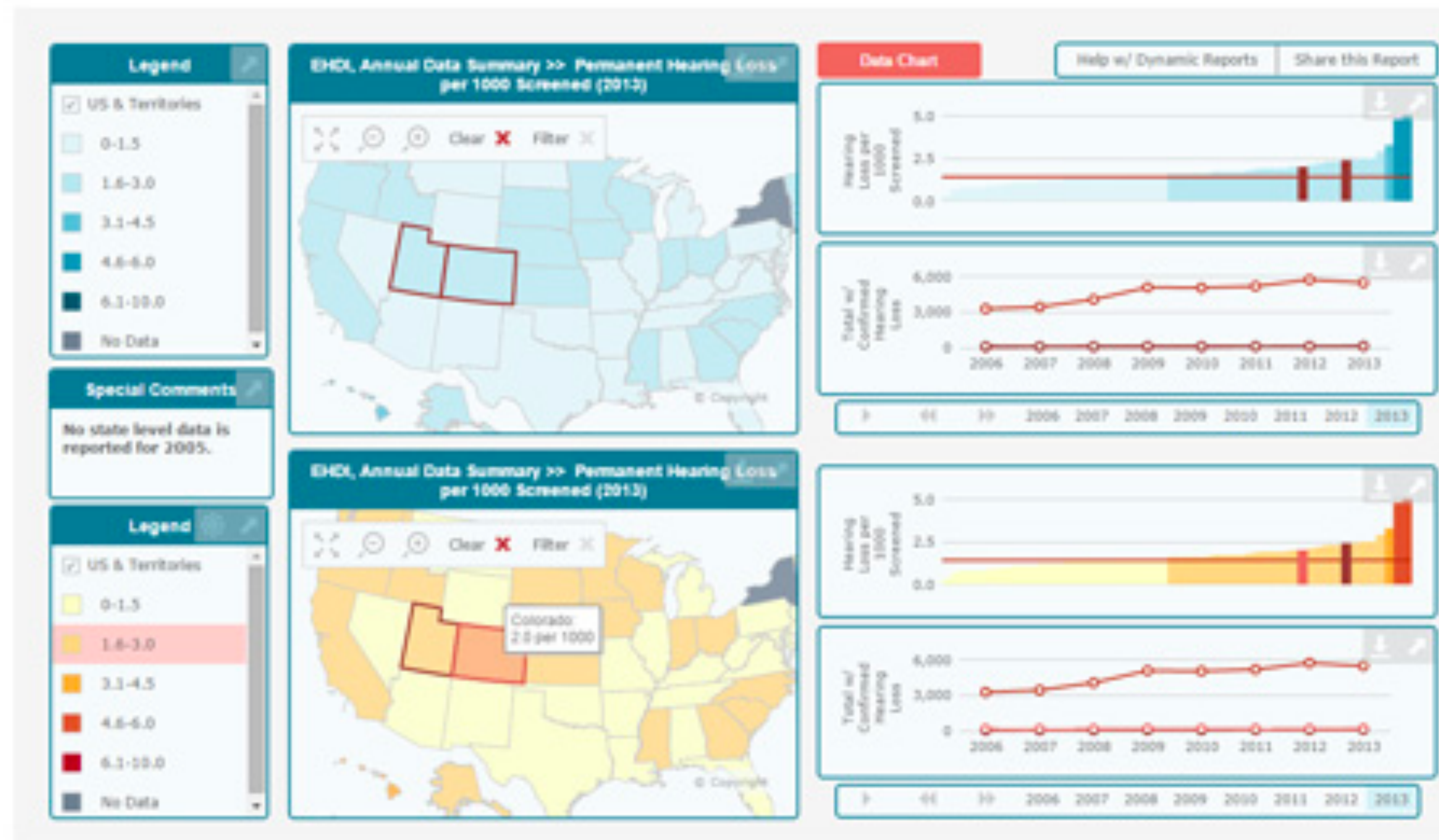
Exploratory:

- multiple linked views
- interactivity
- complex views

Goals/tasks:

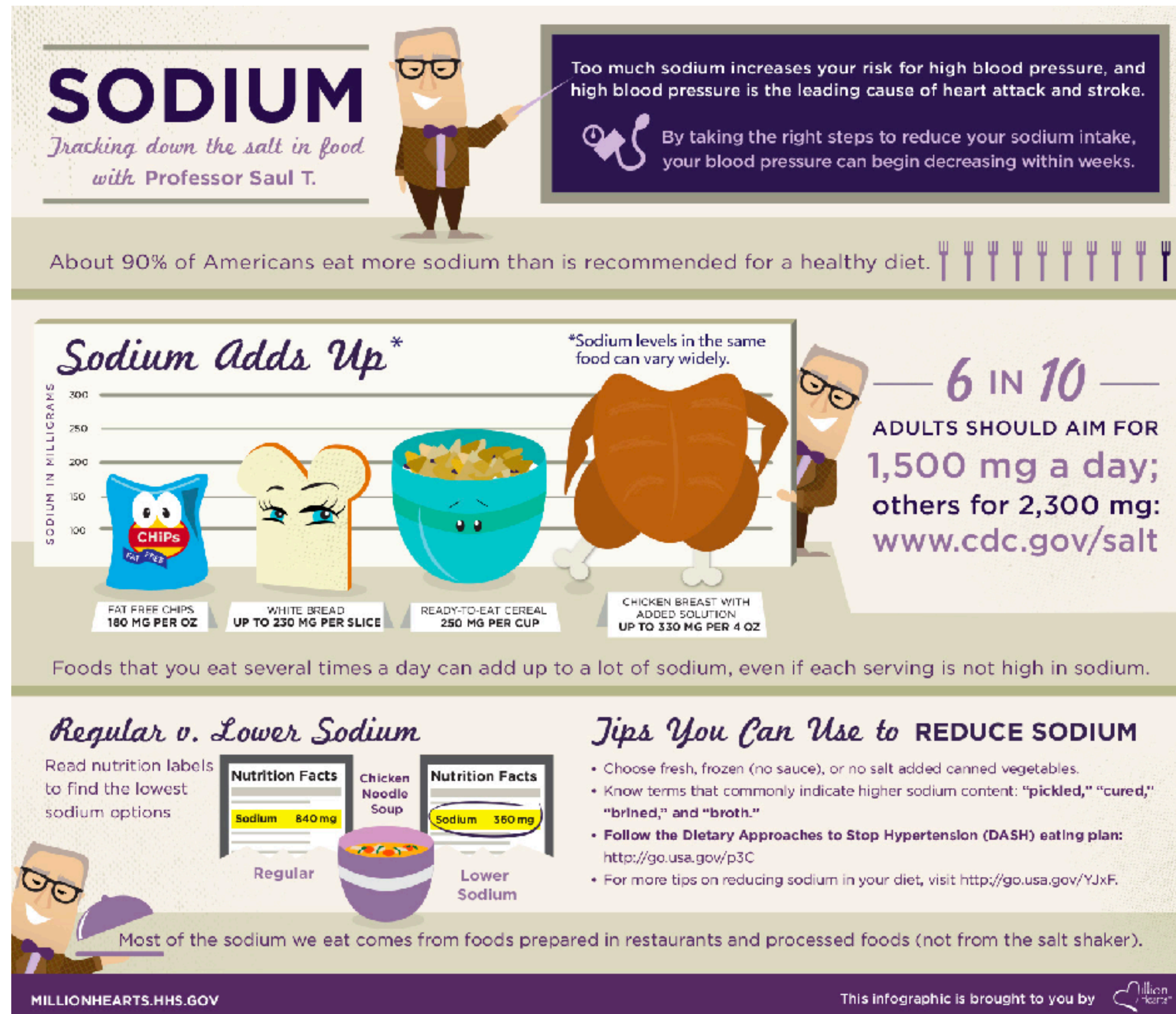
- Discover trends, outliers, features
- Compare (top and bottom)

Prevalence of Hearing Loss  
Double Map, Prevalence (Standard Contrast)





# Case: the CDC



Expository:

- few, unlinked views
- use of icons, color
- static, headlines annotated

Goals/tasks:

- Engagement, reflection, persuasion



# Goals goals goals

Goals/tasks:

- Engagement,  
reflection,  
persuasion

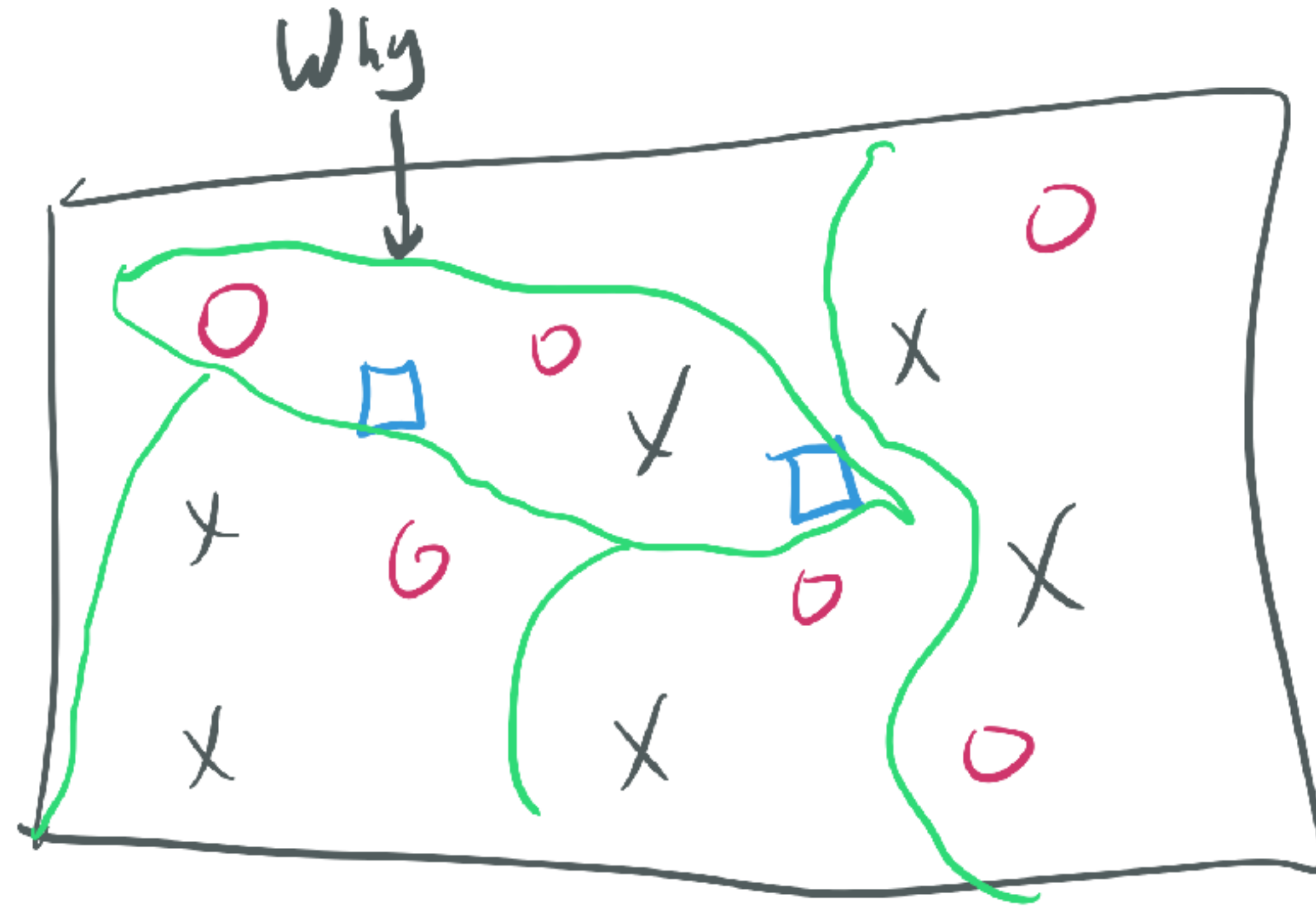
Goals/tasks:

- Discover trends,  
outliers, features

Browse, annotate, explore, summarize, correlate, filter,  
... .. and so on



# “Why” trims the design space





➔ Analyze

➔ Consume

➔ *Discover*



➔ *Present*

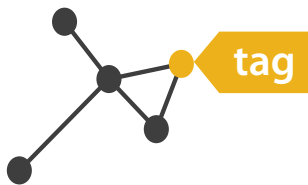


➔ *Enjoy*

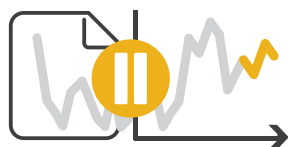


➔ Produce

➔ *Annotate*







➔ *Record*



➔ *Derive*

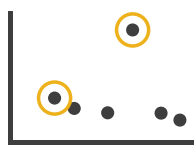


➔ Search

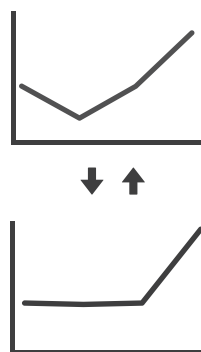
	Target known	Target unknown
Location known	 <i>Lookup</i>	 <i>Browse</i>
Location unknown	 <i>Locate</i>	 <i>Explore</i>

➔ Query

➔ Identify



➔ Compare



➔ Summarize





➔ Analyze

➔ Consume

➔ Discover



➔ Present

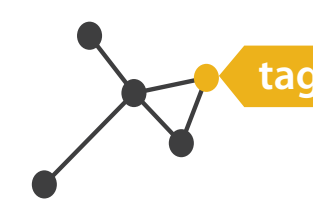


➔ Enjoy



➔ Produce

➔ Annotate







➔ Record



➔ Derive

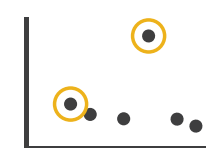


➔ Search

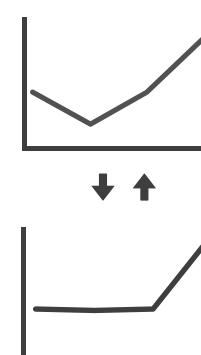
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Location known	 <i>Lookup</i>	 <i>Browse</i>
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➔ Query

➔ Identify



➔ Compare



➔ Summarize



Consuming analysis  
vs.  
Producing analysis



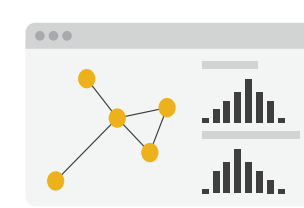
➔ Analyze

➔ Consume

➔ Discover



➔ Present

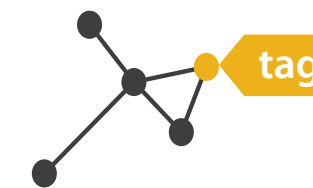


➔ Enjoy



➔ Produce

➔ Annotate







➔ Record



➔ Derive

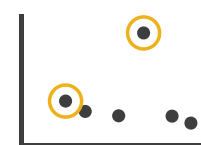


➔ Search

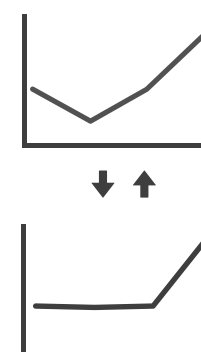
	Target known	Target unknown
Location known	 <i>Lookup</i>	 <i>Browse</i>
Location unknown	 <i>Locate</i>	 <i>Explore</i>

➔ Query

➔ Identify



➔ Compare



➔ Summarize



Search:  
goal-directed vs  
non-specific goals\*\*



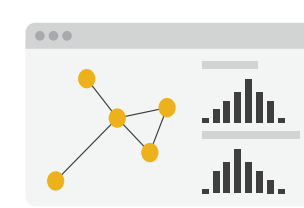
➔ Analyze

➔ Consume

➔ Discover



➔ Present

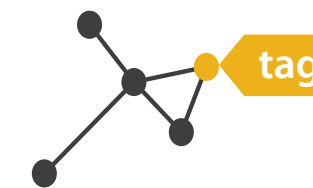


➔ Enjoy



➔ Produce

➔ Annotate







➔ Record



➔ Derive

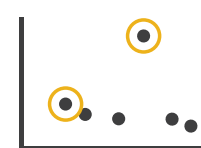


➔ Search

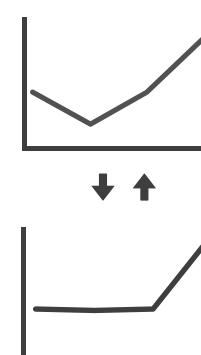
	Target known	Target unknown
Location known	 <i>Lookup</i>	 <i>Browse</i>
Location unknown	 <i>Locate</i>	 <i>Explore</i>

➔ Query

➔ Identify



➔ Compare



➔ Summarize



Query: lowest level  
1, 2, 2+ item  
operations

deep dive:  
measuring aesthetic appeal in  
vis,  
a study

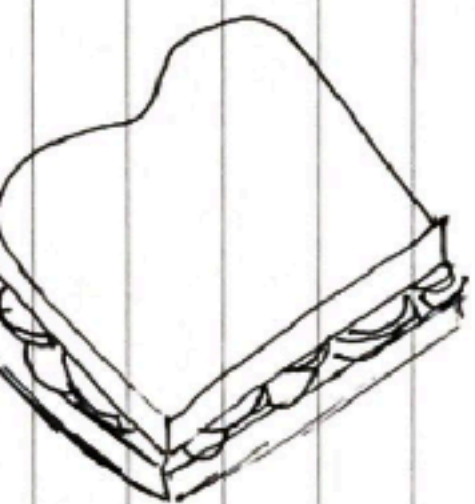


deep dive:  
using “produce”-type data to  
drive exploration

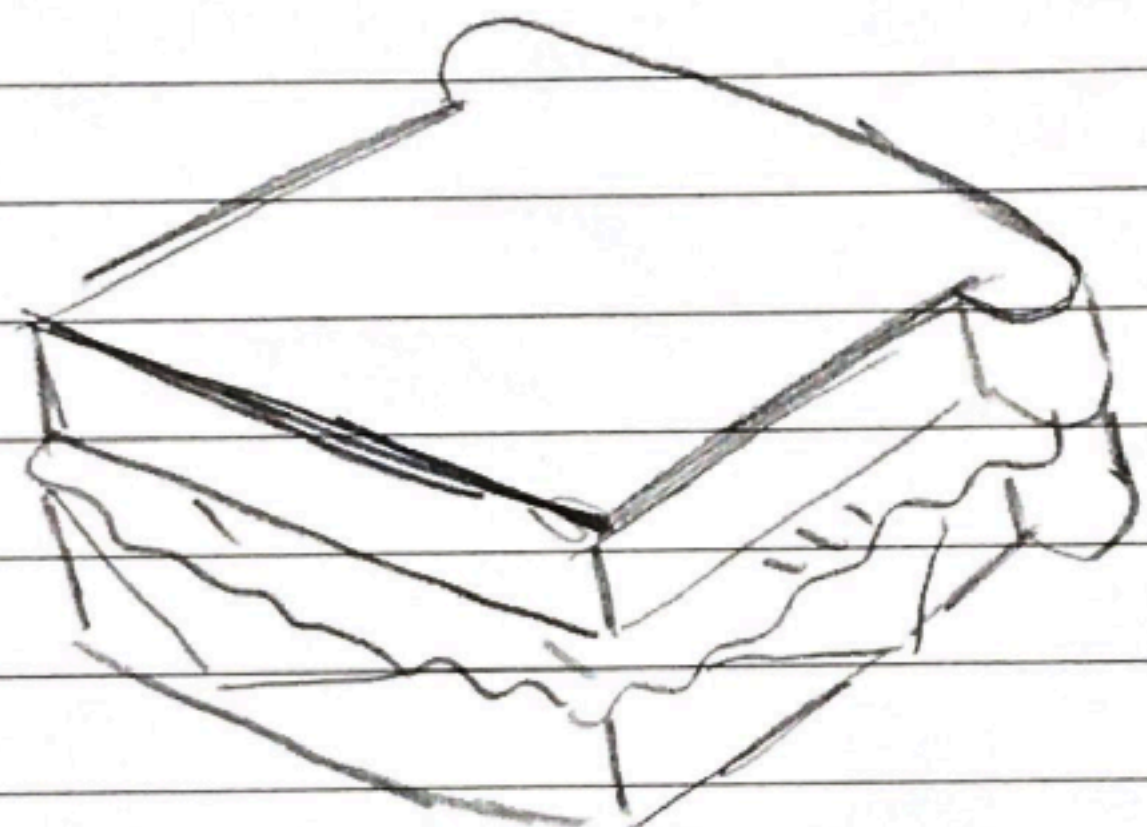
deep dive:  
using exploration data to  
drive machine learning



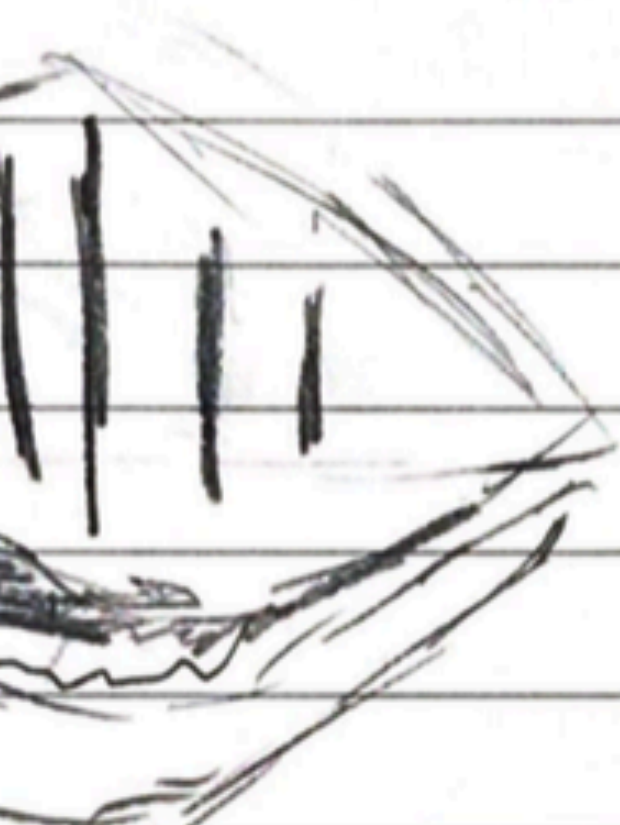
exploring sandwich similarity



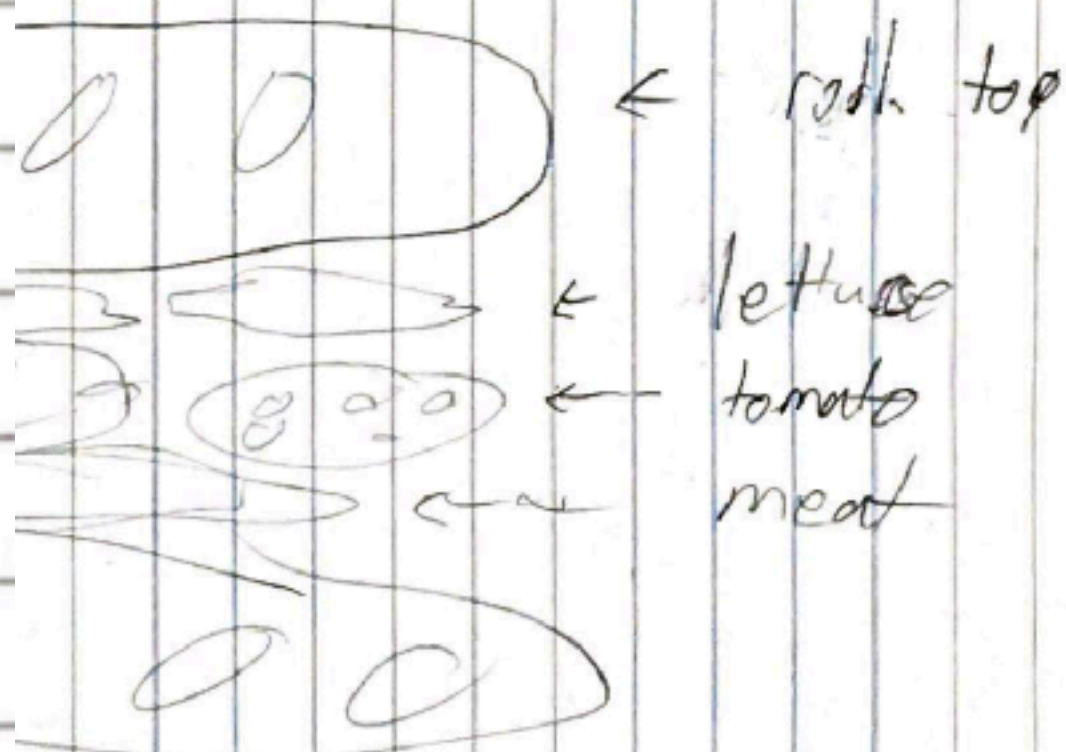
- Cucumber - 6 slices
- Cream cheese - 4 tbs
- Salami - 6 pieces
- Pepper - 1 sp



lettuce  
bread  
ham  
mustard



Panini Sandwich  
- Cheese (cheddar)  
- tomatoes  
- Basil Spreading  
- Walnuts (crushed)



Bacon →  
cheese →  
lettuce →  
Hamburger →  
bread →

