



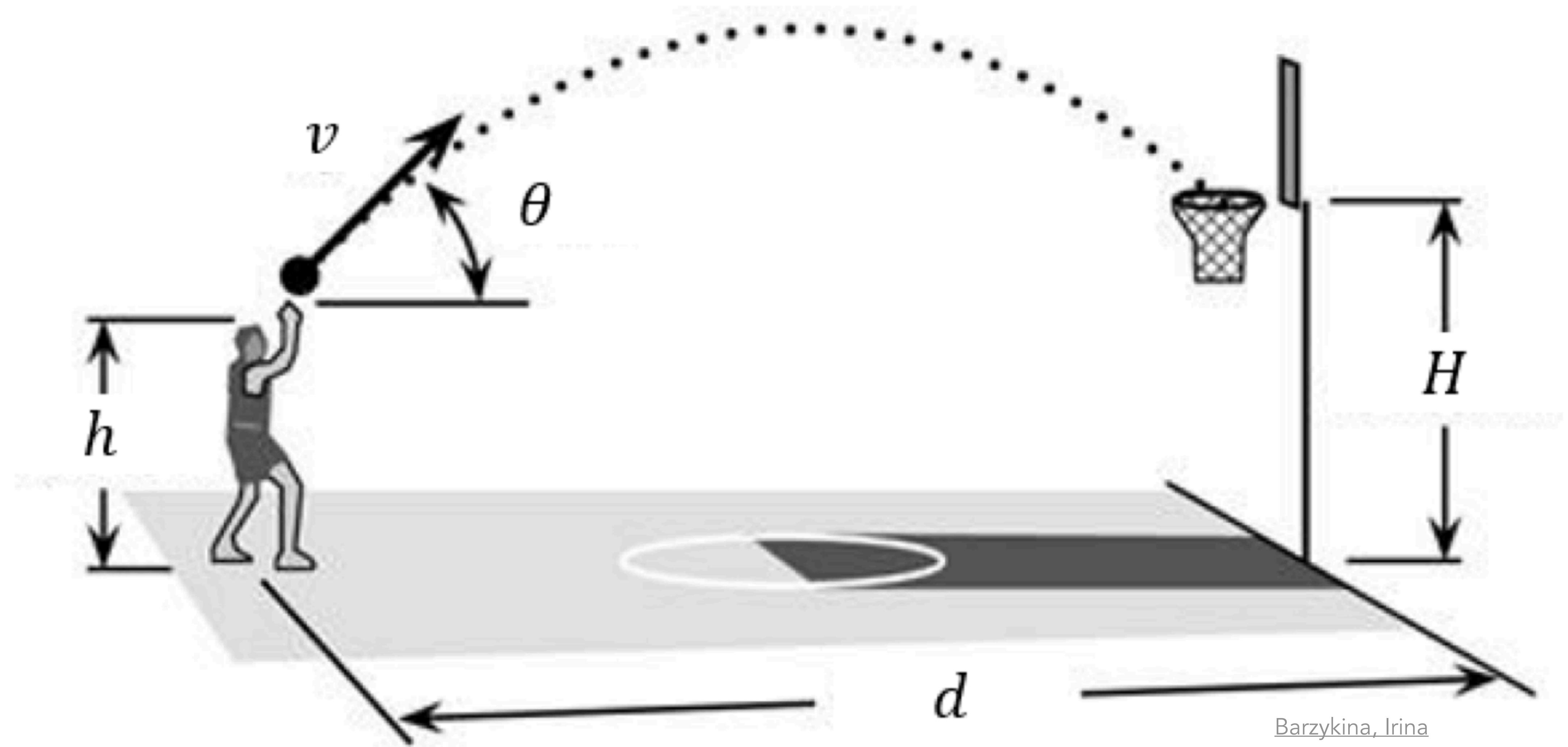
Humane Interfaces

DESN 24427 Design Strategy & Computation

The human brain

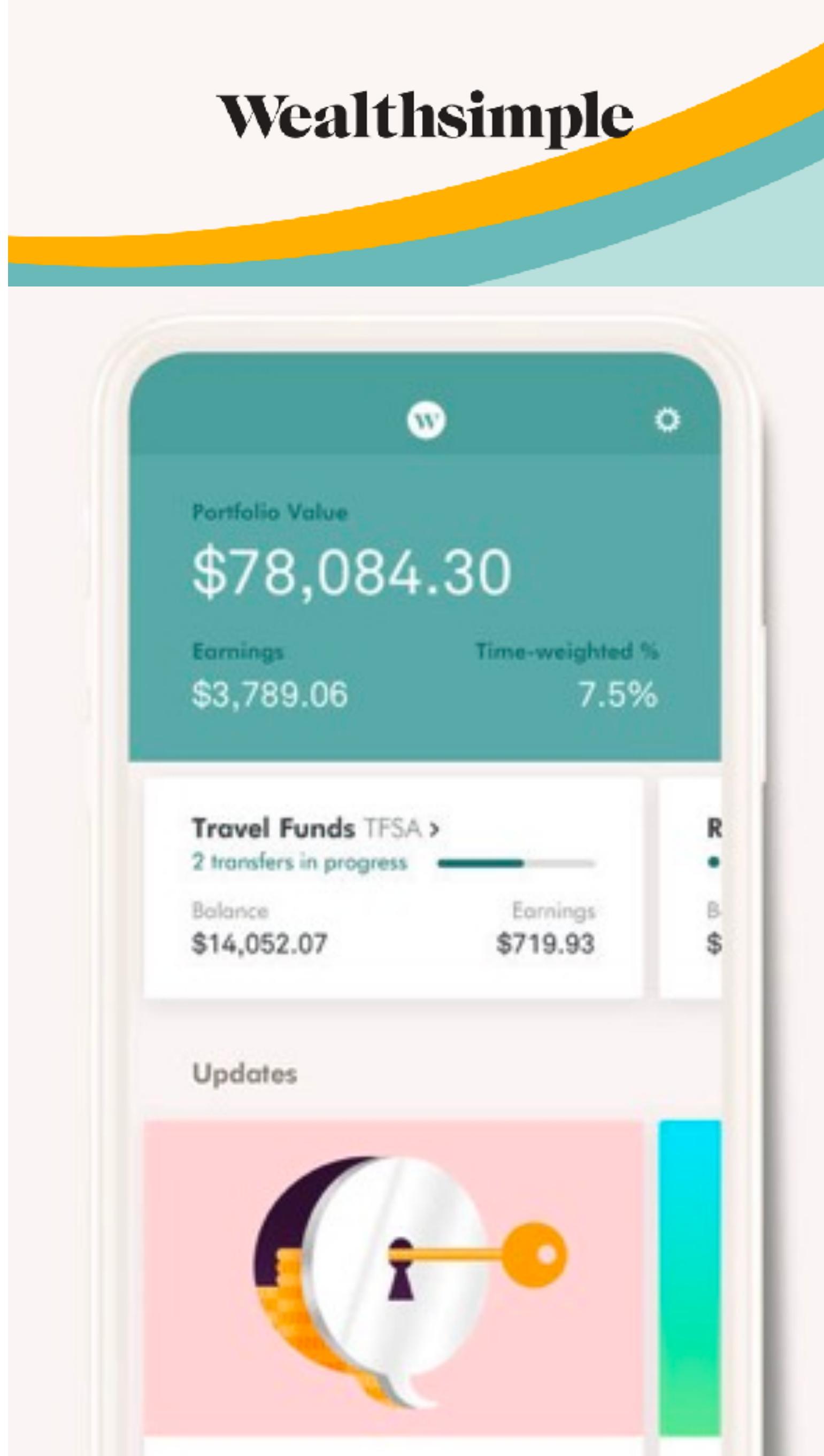
A sophisticated, powerful ‘computer’

- They are **pattern recognition** computers
- They **manage** the lots of **data** from senses:
 - discern visual **patterns**
 - establish **priorities** to things seen
 - make **sense** of visual world
- They **quickly process** visual information



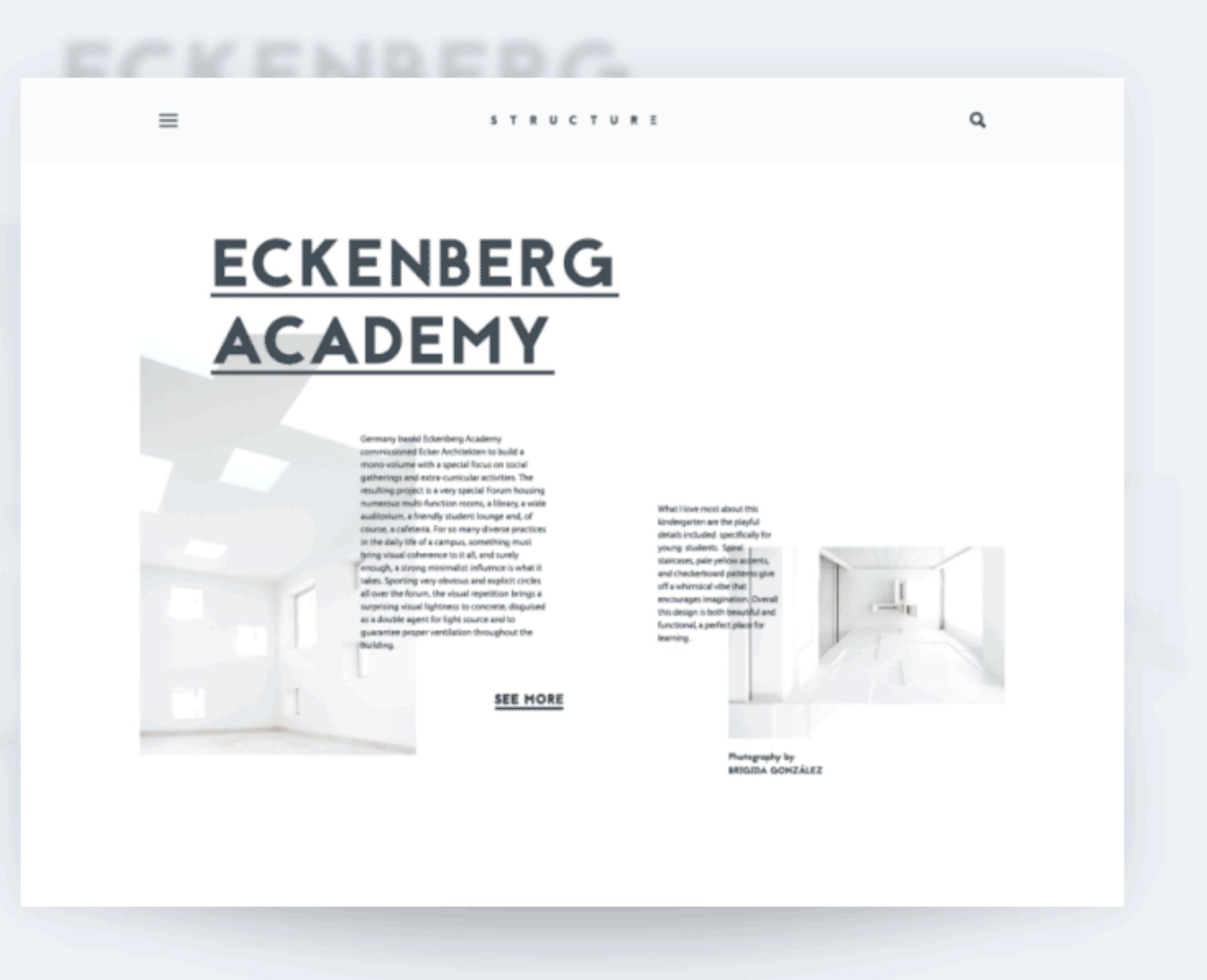
Imagine manually calculating the trajectory of a thrown basketball with pen and paper.

Barzykina, Irina



Convey tone, communicate brand

- **Brand considerations should never override users' goals**
- But an effective interface should embody the brand promise of its product line and organization



Credit: TubikStudios

Lead users through the visual hierarchy

- Users unconsciously ask themselves
What's important here? then How are these things related?
- **UI** should provide **answers** to both of these questions by creating **hierarchy** and establishing relationships

Establish relationships

In your scenario:

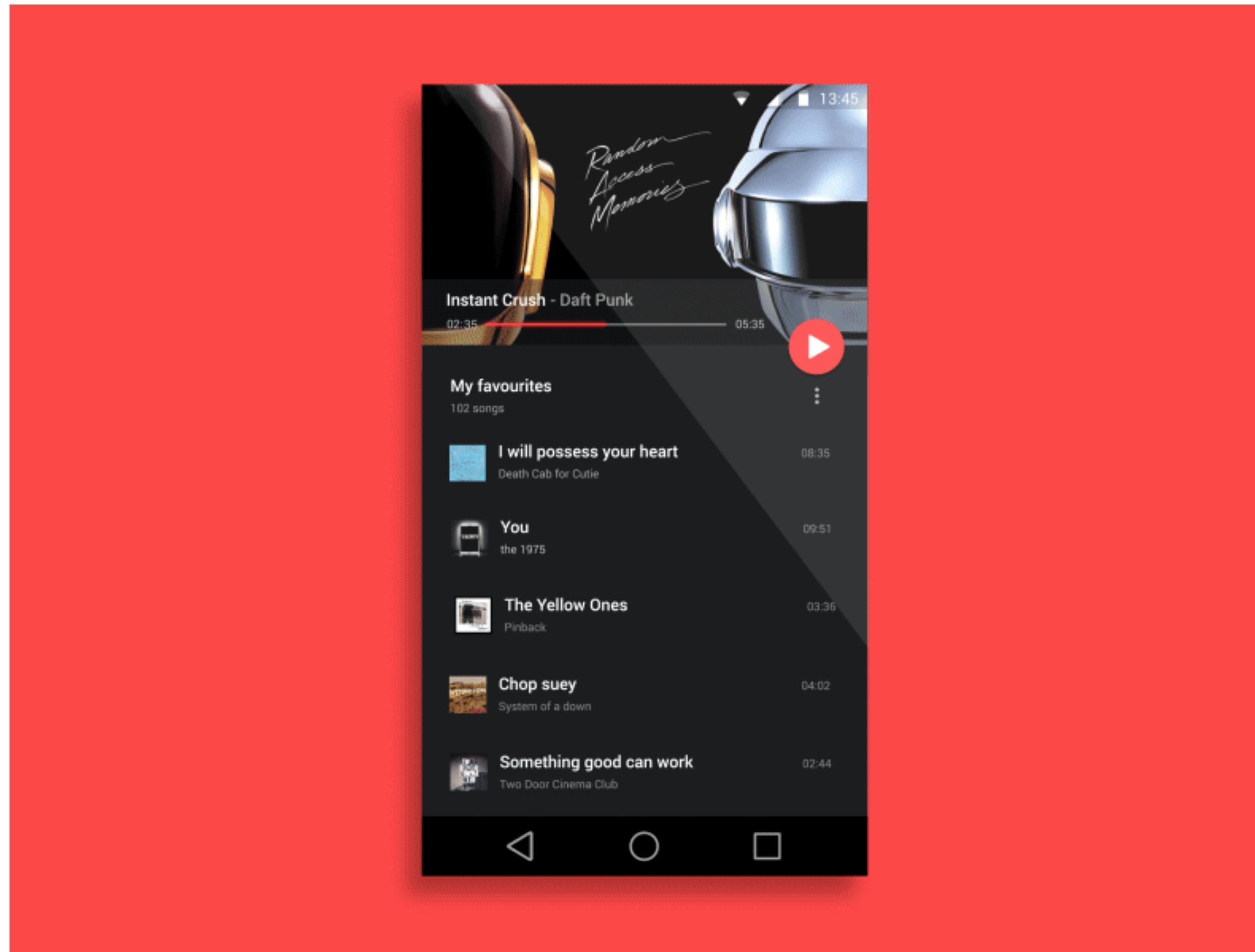
- Which elements have **similar functions**?
- Which elements are **used together** most often?

Elements that tend to be used together generally should be grouped spatially and perhaps sequentially to reinforce conceptual relationships.



Credit: Jordi Verdu

Items in proximity to one another generally are related.



Credit: Anish Chandran

Group items that are not adjacent by giving them common visual properties, forming a pattern that eventually takes on meaning for users.

Sup supremenewyork • Follow

supremenewyork "BLESSED" is now available on iTunes.

Load more comments

firefistacethaslumlord Put it on Amazon prime.

chelannd @baljeetdamc No, you won't.

onehundredinone 🔥 🔥 Blessed🔥 🔥

bittahgenius_ @adrianresendes I'll sell you the bundle if that's what you want. If not FOH

kiaradowson Yum

isitinyett Got it

oaalessiett Drops malatssssss corriere sbrigati!!!!

shrederis You can watch it on porn hub

ukiuki_wakuwaku_ 写真めっちゃええですね!! 良かったら僕の写真ものぞいて

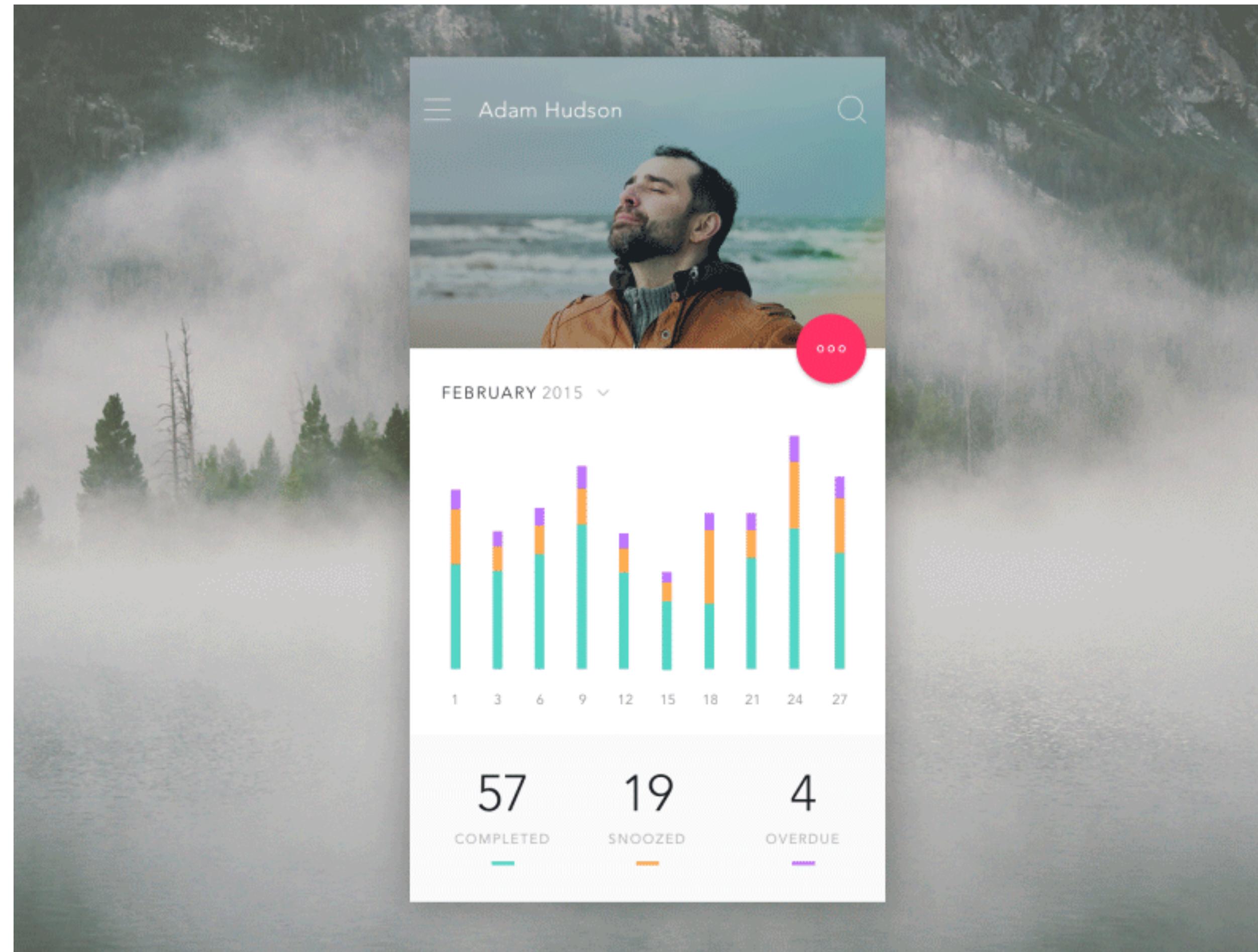
141,915 likes

1 DAY AGO

Add a comment... ...

Credit: Supreme

After deciding what the groups are and how best to communicate them, consider how distinguishable they need to be, and how prominently the group needs to appear.



Credit: InVision

Start: My Location X

End: Loblaw Digital X

Drive Walk Transit

Custom... ▼

Arrive ▼ 2019-11-21, 7:30 PM

42 min. Details ▾

6:45 PM – 7:26 PM

15 min. ▶ 504A ▶ 4 min.

● Start
Campbell Ave, Toronto ON

● Walk 15 min.
Enter Dundas St W station

504A Take the 504A King streetcar Eastbound
Every 6–10 min

● Dundas St W
15 stops

● Atlantic & King

● Walk 4 min.

● Arrive
Loblaw Digital

6:49 PM - 7:26 PM (37 min) Print

● ▶ 504A ▶ ●

7:02 PM from Dundas West
16 min

≡ SCHEDULE EXPLORER

6:49 PM ● ○ **Campbell Ave**
Toronto, ON

● Walk
About 13 min, 1.0 km

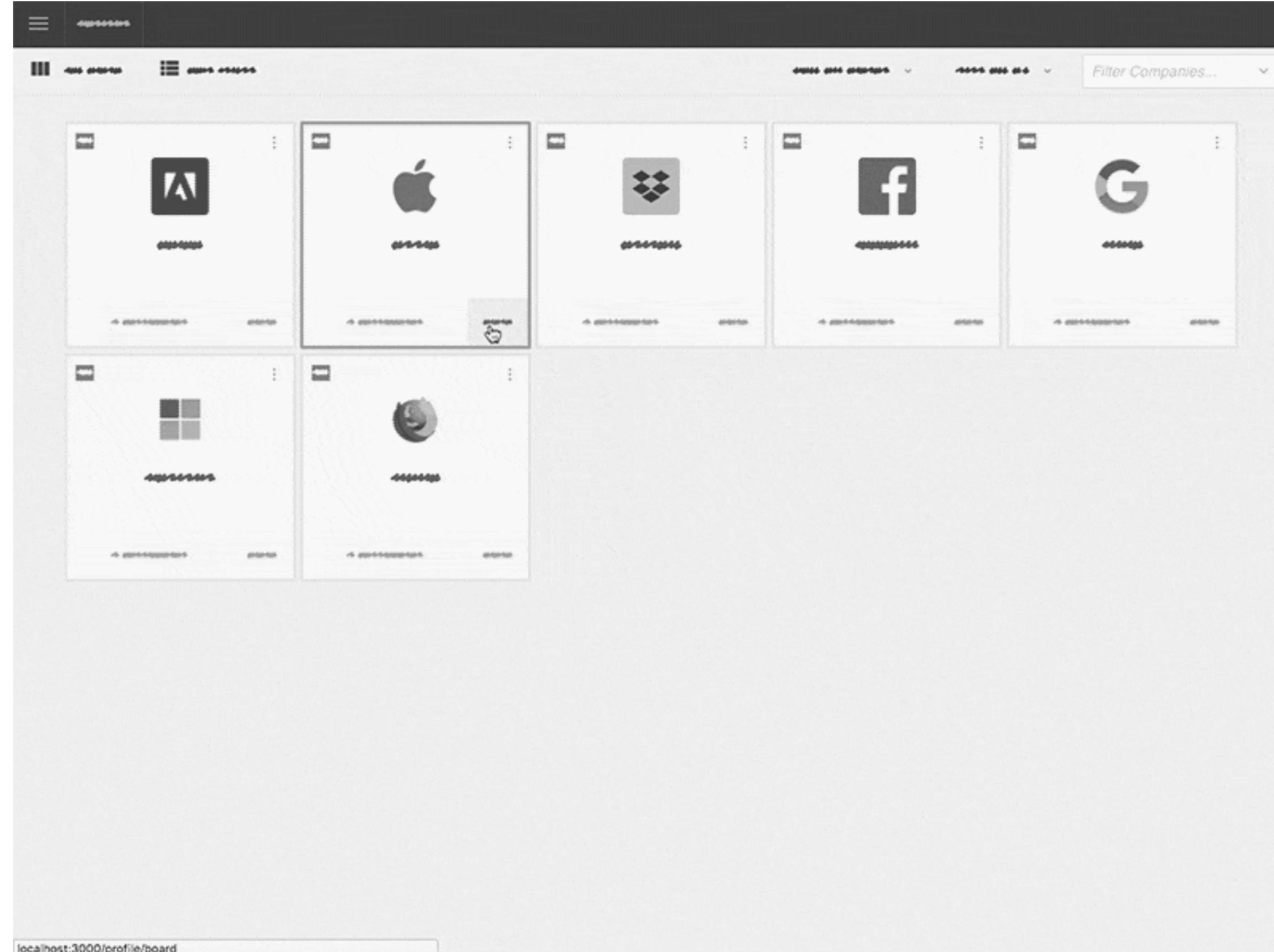
7:02 PM ● ○ **Dundas West**

● ○ **504A King to Distillery**
21 min (15 stops) · Stop ID: 14665 · ⚡

7:23 PM ● ○ **King St West At Atlantic Ave**

● Walk
About 3 min, 240 m

7:26 PM ● ○ **Loblaw Digital**
40 Hanna Ave, Toronto, ON M6K 0C3



Occasionally, squint at it

- Squint at the screen to see which elements pop out, which are fuzzy, and which seem to be grouped
- This can often uncover previously undetected issues in layout + composition



Align to a grid

- The decision not to align elements or groups of elements should be made judiciously, and always to achieve a specific differentiating effect.

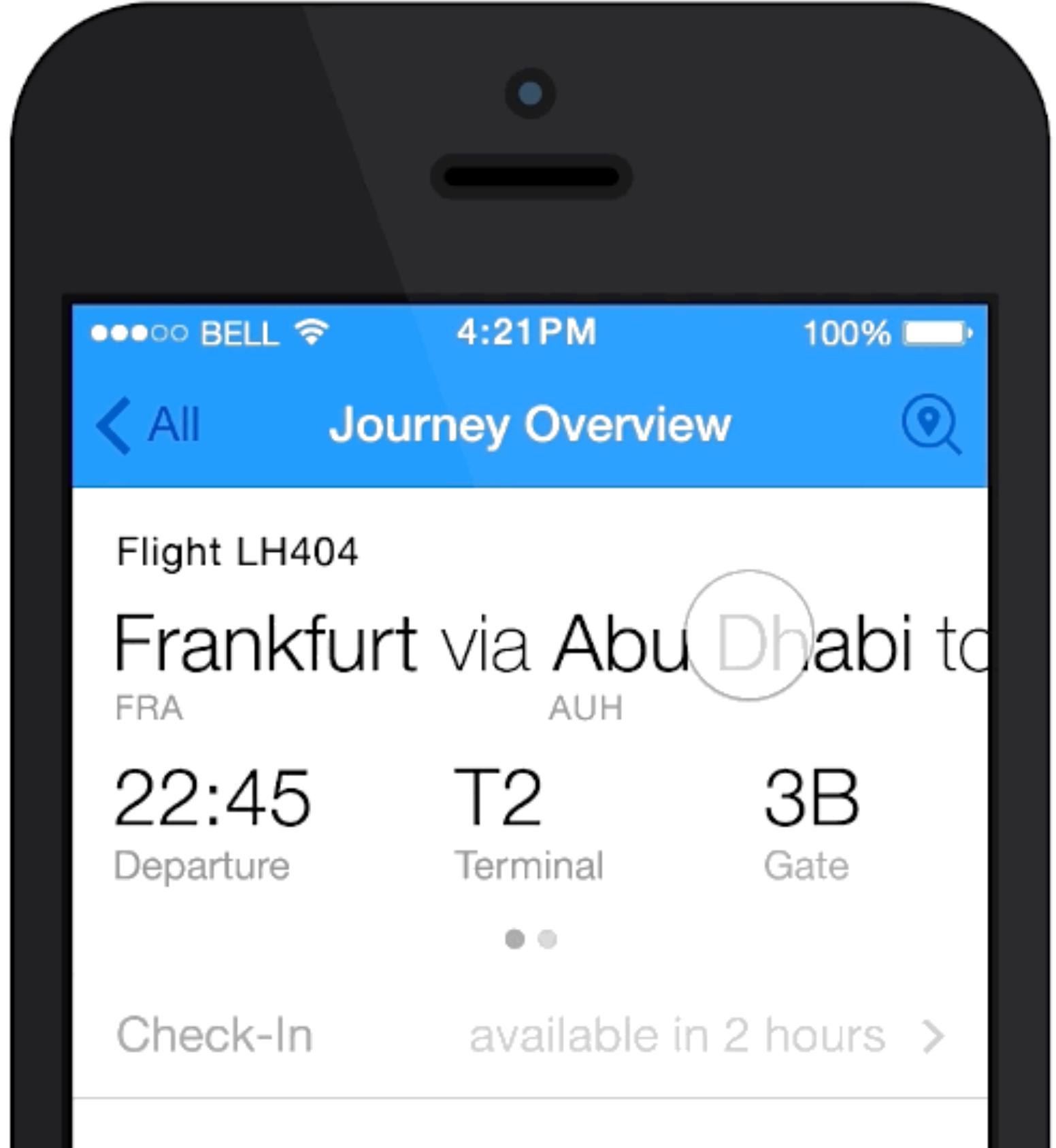


Respond to commands

- After executing an input (tap, gesture, submit) the user needs to see some response, to know it **“heard”** them.

If the response happens this long after the command...

- **Instantly:**
this response does not need extra visual design beyond that of the tools itself.
- **Longer than a tenth of a second but less than a second:**
provide one subtle visual cue that the command was received, and another when the activity is complete.
- **Longer than that up to ten seconds:**
let the user know about the small delay and provide some visual cue that the process is running, most commonly with a looping animation of some sort along with an estimate of the time it will take
- **Longer than ten seconds:**
design an alert explaining the delay, another for a running status update that lets them know the process is continuing in the background, followed by a respectful cue when the process is complete so they can return to the task.



Draw attention to important events

- Make the thing you want to get attention different, and it will command attention.



Keep it simple

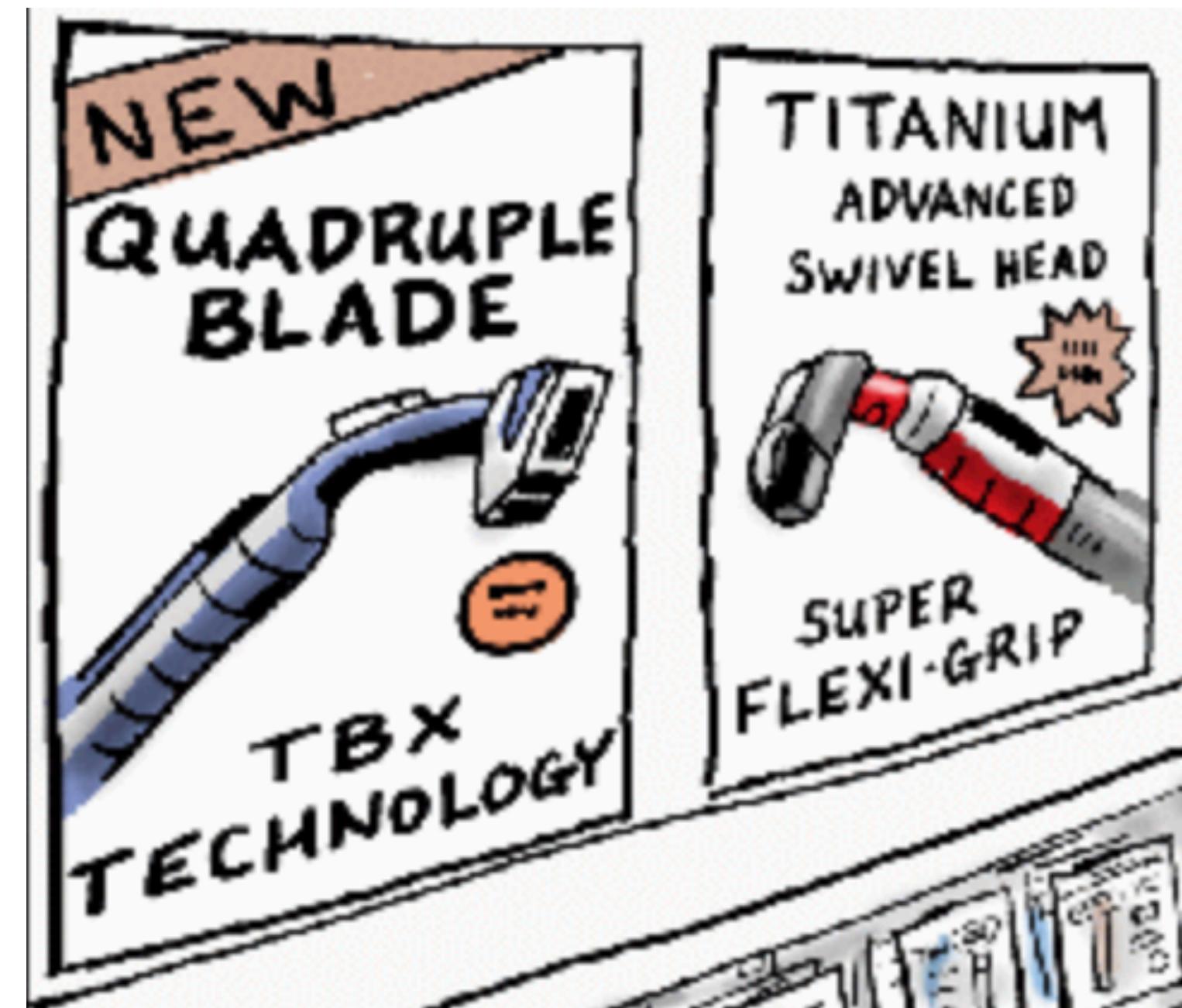
- Visual interfaces should strive to be minimal: minimize the amount of visual work
- Unnecessary variation is the enemy of a coherent, usable design

The Smallest Effective Difference

Content Adapted from:
Edward R. Tufte—Visual Explanations p.73 and https://medium.com/@pj_/the-smallest-effective-difference-90fc94d5ab0d

The Smallest Effective Difference

Tufte describes this as the 'Occam's razor' of info. design

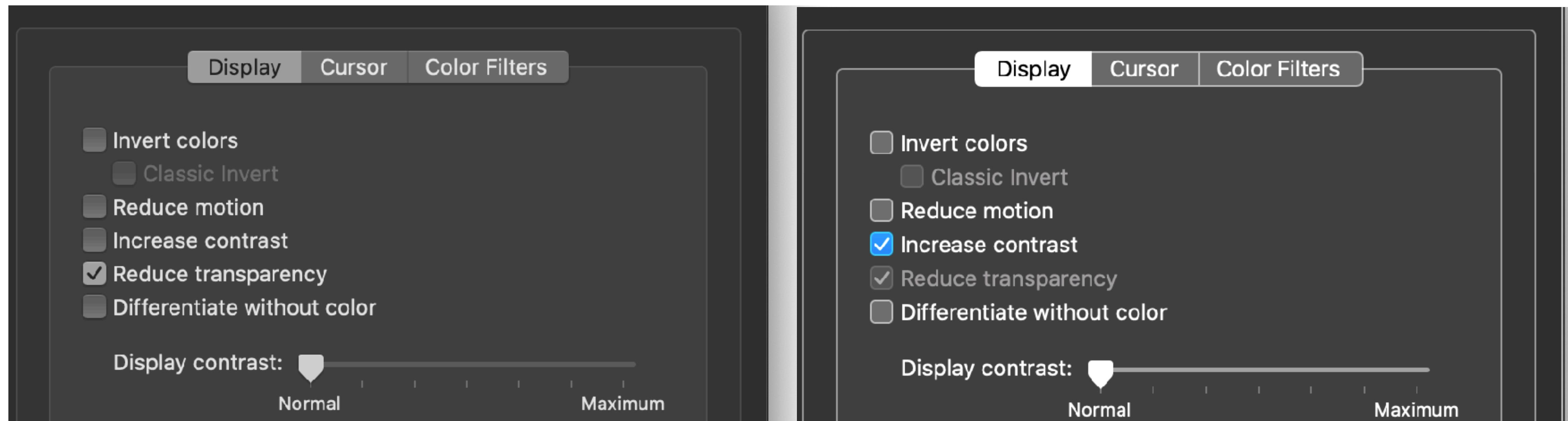


The Smallest Effective Difference

Tufte describes this as the 'Occam's razor' of info. design

Take a visual element then ask yourself: **is the difference noticeable?**

- **Too much contrast:** things look and feel wrong [additional noise]
- **Not enough contrast:** desired effect is lost.
- **Just enough contrast:** emphasize what is important, deemphasize what is not





Please Enter Your Phone Number:

216 ▾ 410 ▾ 0000 ▾

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Next

A thought experiment

- In April, 2016 developers started a meme to design the worst possible input for a phone number on a form
- Your entire project two was spent working on ideal interactions...

What can we learn from the worst possible interaction?

Please enter your phone number:

(361)-235-1416

8



-



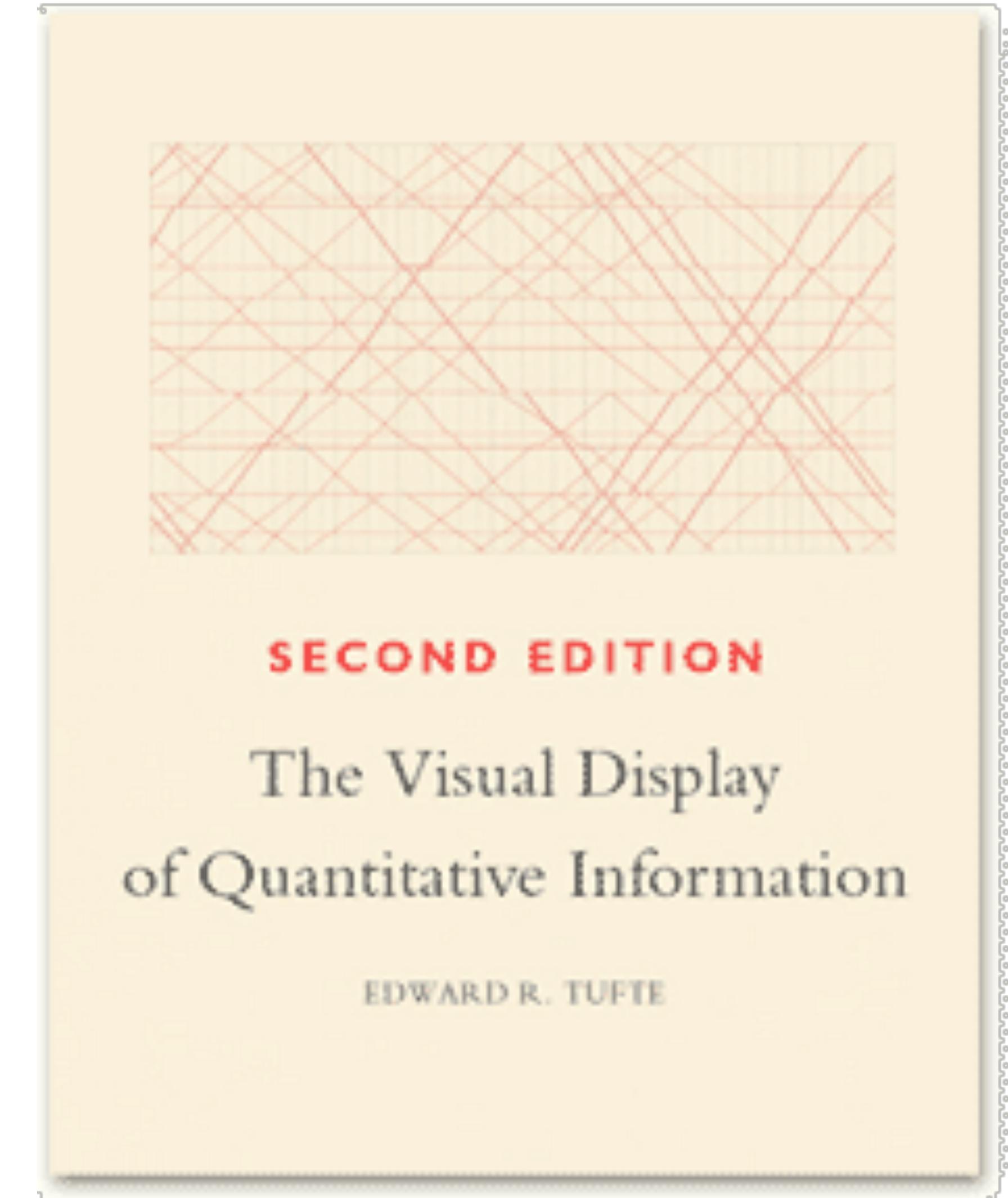
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To learn more

Check out this resource

- Tufte, Edward R. *The Visual Display of Quantitative Information*. Graphics Press, Cheshire, Conn, 2001. (book)
 - Link: <https://tinyurl.com/yfgbaepy>





activity:

Purposefully Bad Interactions

1. Working in small groups, devise the worst possible means to input your address.
2. Prototype the interaction using XD, InVision or Sketch.
3. What did you learn about making this interaction painless by first making it painful?
4. You have 30mins.