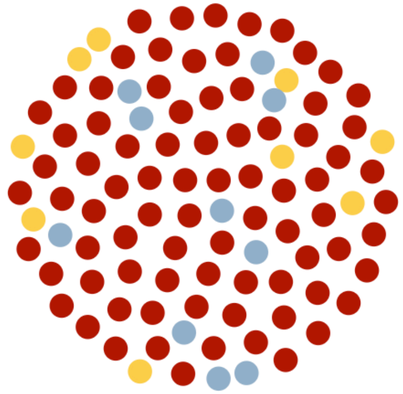
Data Visualization & Design

Week 11

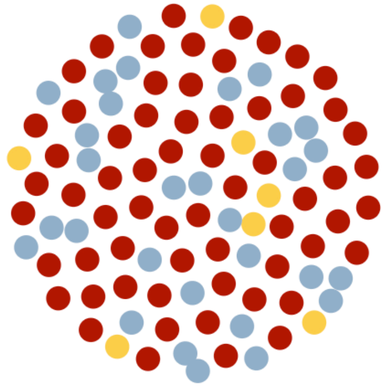
This week in **visualization**…

vaccinated susceptible vaccinated but susceptible infected contact with an infected person



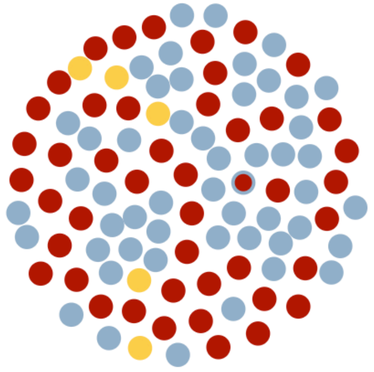
NOT PROTECTED

10.0% vax rate



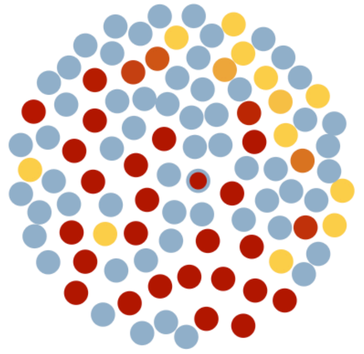
NOT PROTECTED

30.0% vax rate



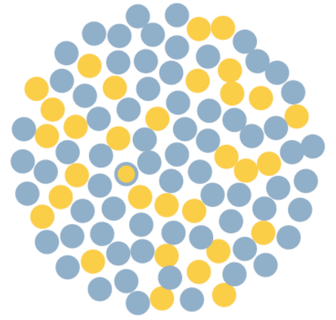
NOT PROTECTED

50.0% vax rate

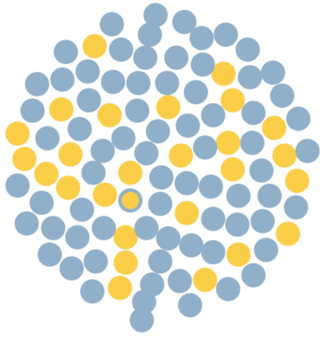


NOT PROTECTED

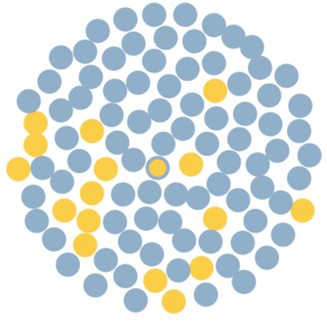
58.5% vax rate, similar to **Okanagan County, WA**



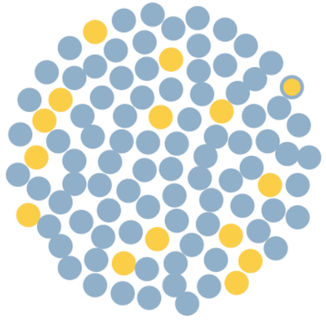
68.9% vax rate, similar to **Thurston County, WA**



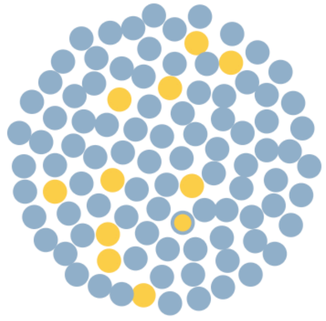
74.4% vax rate, similar to



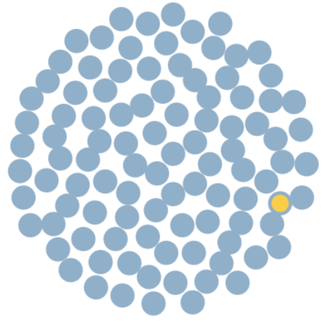
83.8% vax rate, similar to



86.0% vax rate, similar to



90.0% vax rate, similar to



99.7% vax rate, similar to

1. **VR Demo** (Google Cardboard)
2. **VR Design** Considerations
3. **Check-in:** Final Project Narratives
4. Studio: **Introduction to VR** with D3.js and A-Frame

1. **VR Demo** (Google Cardboard)
2. **VR Design** Considerations
3. **Check-in:** Final Project Narratives
4. Studio: **Introduction to VR** with D3.js and A-Frame

Google Cardboard

1. **VR Demo** (Google Cardboard)
2. VR in **Visualization**
3. **Check-in:** Final Project Narratives
4. Studio: **Introduction to VR** with D3.js and A-Frame

Designing for a new dimension is **hard**.

In virtual reality, best practices are informed by **physiological considerations**, along with human perception and cognition.

1. Avoiding simulator sickness

Mismatches between physical and visual motion cues can give rise to nausea.

2. Familiarity

Because a virtual reality canvas is infinite, it is important to provide the user with cues for focus and attention as they explore a new environment.

Can VR be **useful** for visualization?

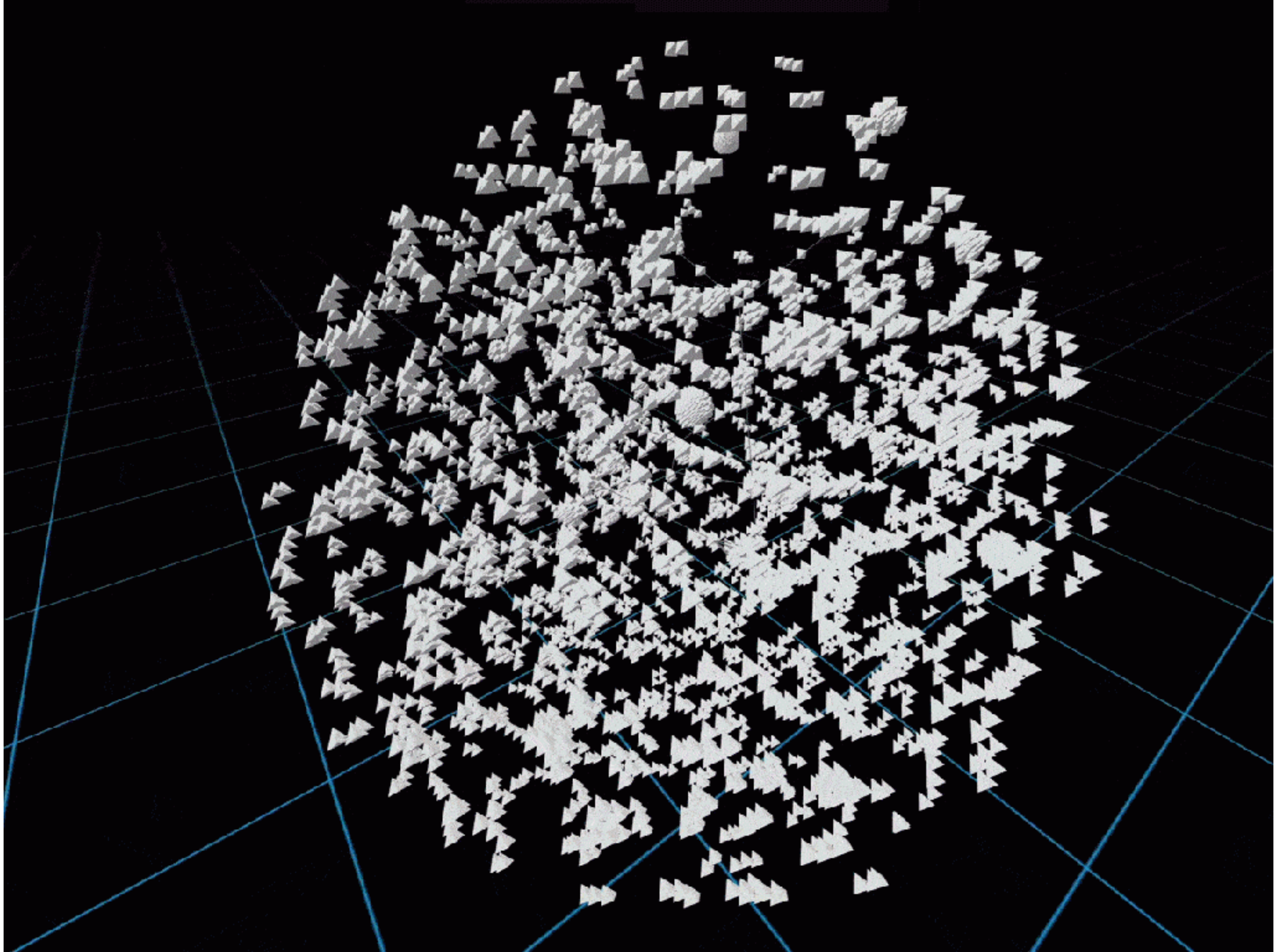
“I have **never seen a single example** [of VR-enabled visualization] that adds value and therefore makes sense.”

— Stephen Few

Point: Virtual reality can help our brains better explore, process, and digest high-dimensional data.

Point: Virtual reality can help our brains better explore, process, and digest high-dimensional data.

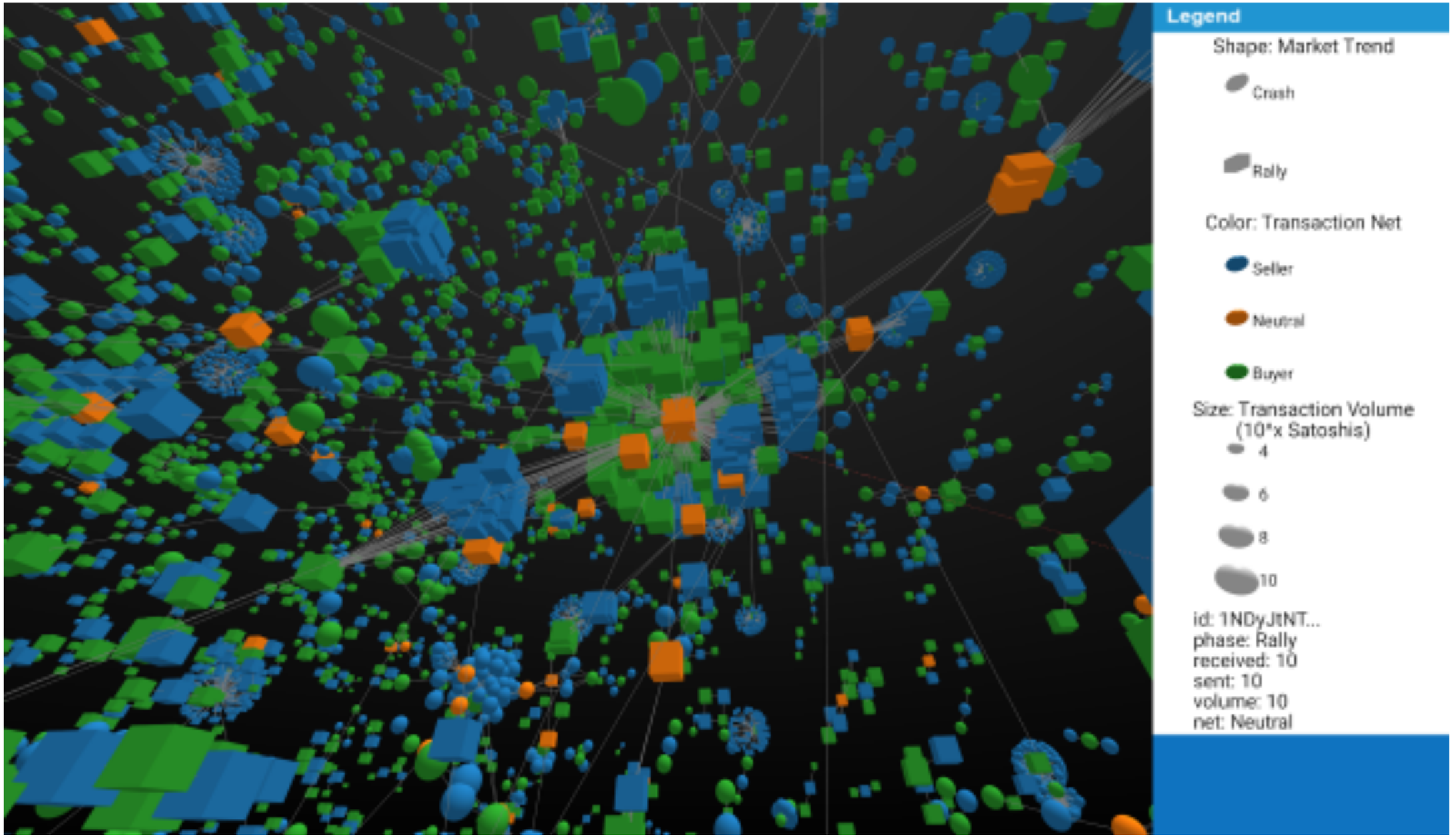
Counterpoint: VR *only* adds one more dimension: depth.



Point: Spatial perception in the human brain can be better leveraged to make sense of data.

Point: Spatial perception in the human brain can be better leveraged to make sense of data.

Counterpoint: The spatial features of VR apps do not need a VR headset to be experienced.


Legend
Shape: Market Trend
Crash
Rally
Color: Transaction Net
Seller
Neutral
Buyer
Size: Transaction Volume
(10^x Satoshis)
4
6
8
10
id: 1NDyJtNT...
phase: Rally
received: 10
sent: 10
volume: 10
net: Neutral

Point: By pushing the boundaries of visualization technology, VR can help us make sense of otherwise inaccessible datasets.

Point: By pushing the boundaries of visualization technology, VR can help us make sense of otherwise inaccessible datasets.

Counterpoint: We still lose the forest for the trees, and vice versa.

Many of the claims surrounding the value of VR in visualization are **untested**.

Nonetheless, some of them are worth exploring further…

VR’s Potential Value in Visualization

- **“Natural” interactions with data.** When the visualization field is contiguous with our perceptual field, it may invite deeper exploration.
- **Eliminates distractions.** The immersive nature of a VR headset draws the user’s focus to the data alone.
- **Allows for more space.** While this could lead to more visual clutter, VR offers a 360º canvas for information design.

1. **VR Demo** (Google Cardboard)
2. VR in **Visualization**
3. **Check-in:** Final Project Narratives
4. Studio: **Introduction to VR** with D3.js and A-Frame

1. What ***key insight*** is driving your final project?
2. What ***narrative*** are you constructing around that insight?

1. **VR Demo** (Google Cardboard)
2. VR in **Visualization**
3. **Check-in:** Final Project Narratives
4. Studio: **Introduction to VR** with D3.js and A-Frame

https://github.com/emilyfuhrman/datavis_design/blob/master/2019_Spring/Studios/08_Introduction_to_VR_with_D3_and_A-Frame.md