批判

crítica

kritis

نقدية

critical

비판

critique

ritische

ביקורתית

riitiline

critică

Kritická

批判

crítica

kritis

Critical VIS+HCI

CS6967

Prof. Andrew McNutt
School of Computing / Scientific Computing and Imaging Institute

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Agenda

Stakes and domain setting

Course structure

批判

crítica

kritis

نقدية

critical

비판

critique

rítische

ביקורתית

riitiline

ritică

Kritická

批判

crítica

kritis

Course format:
seminar with a twist

批判
crítica
kritis
نقدية
critical
비판
critique
rítische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

Some discussion

批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is data?

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

What is data?

Labor

Relationships

批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is a visualization?

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kritiline
critică
Kritická
批判
crítica
kritis

What is a visualization?

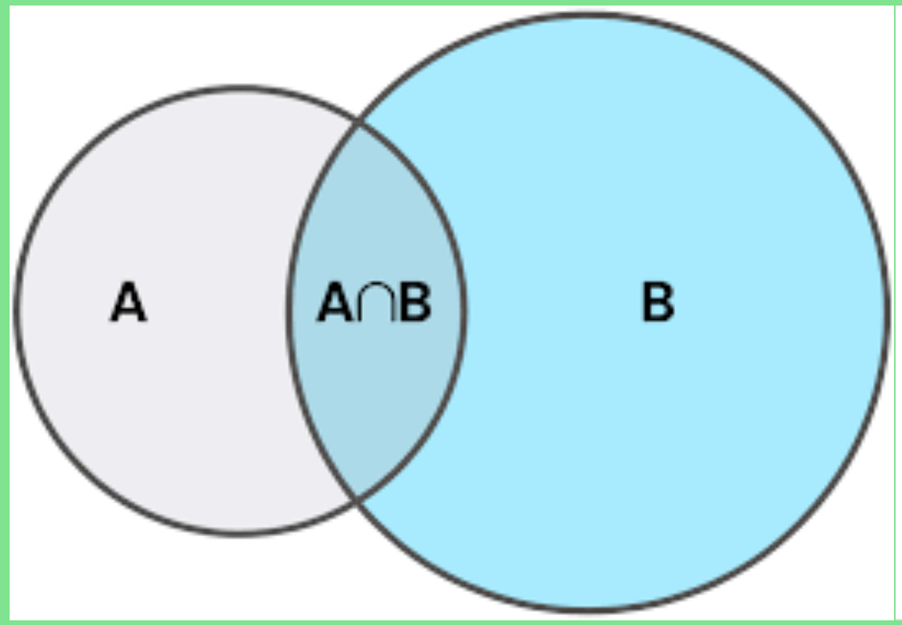
“Transformation of the symbolic into the geometric”
[McCormick et al. 1987]

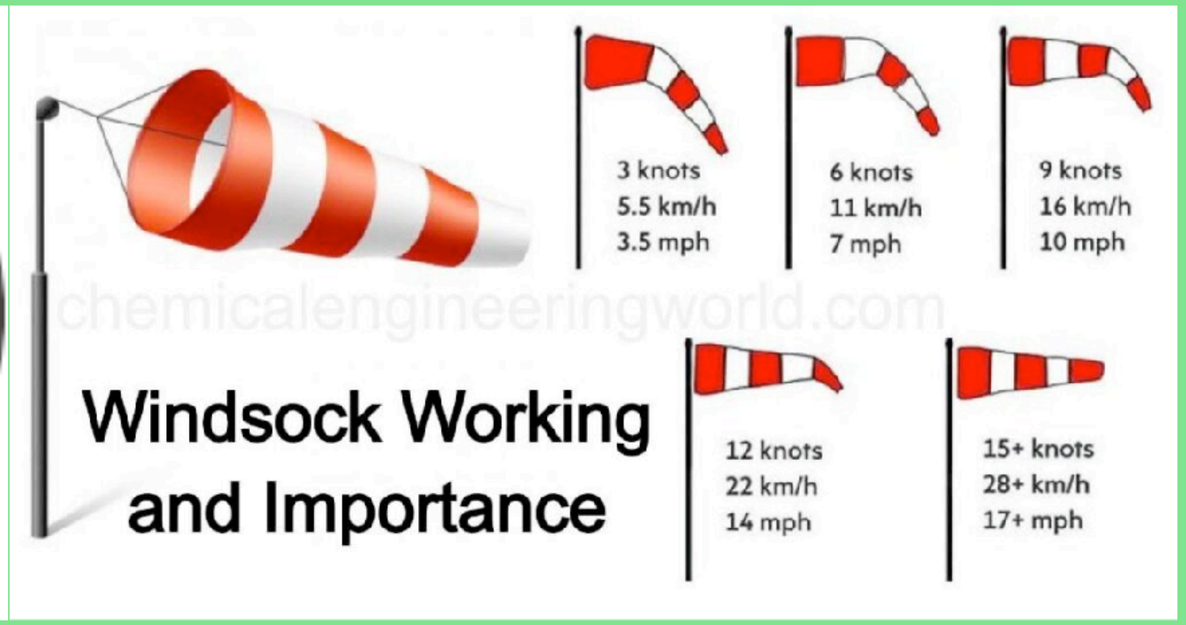
“... finding the artificial memory that best supports our natural means of perception.”
[Bertin 1967]

“The use of computer-generated, interactive, visual representations of data to amplify cognition.”
[Card, Mackinlay, & Shneiderman 1999]

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
kritică
Kritická
批判
crítica
kritis

What is a visualization?





批判

crítica

kritis

نقدية

critical

비판

critique

kritische

ביקורתית

kriitiline

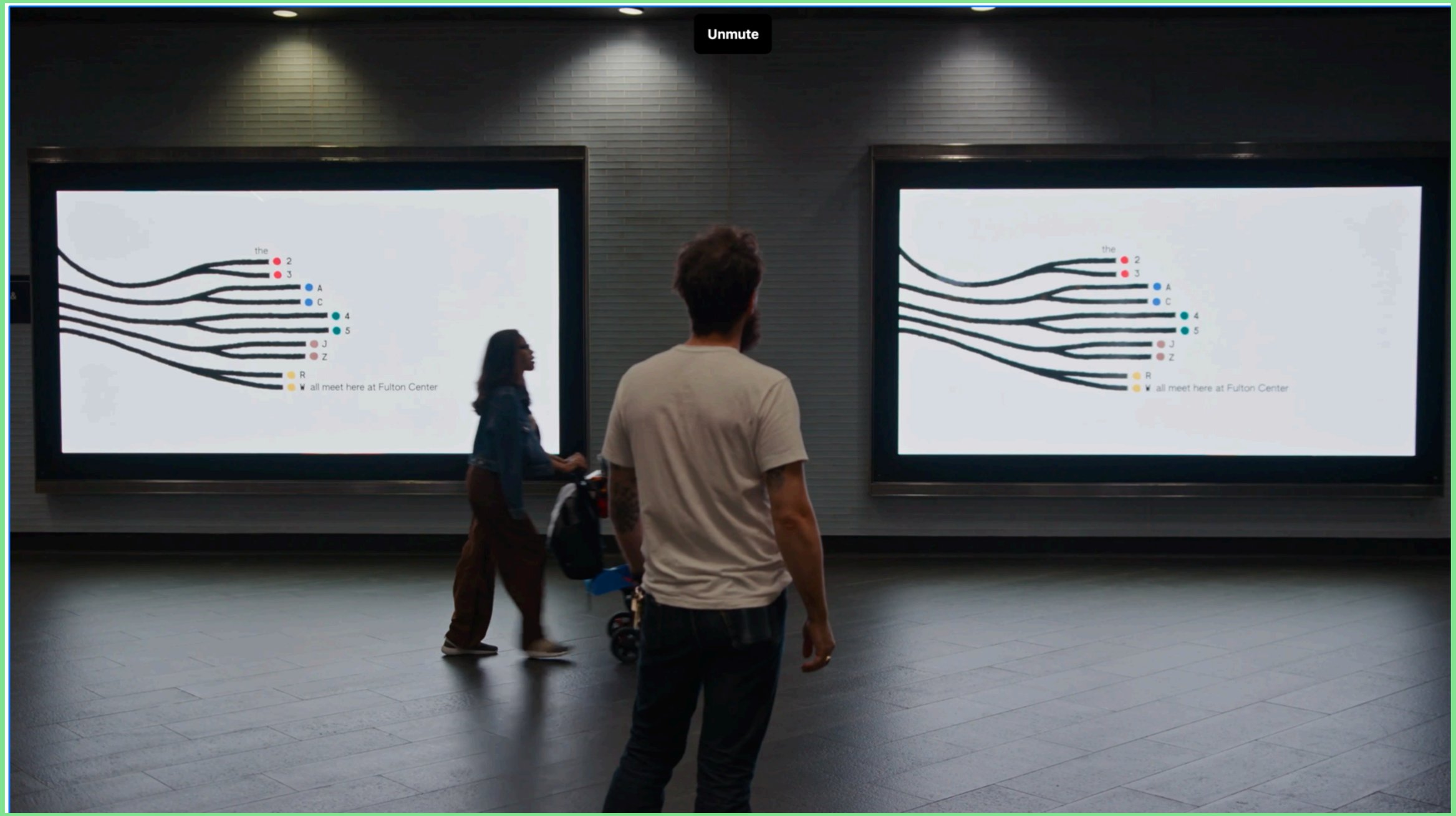
critică

Kritická

批判

crítica

kritis



https://www.pentagram.com/work/a-data-love-letter-to-the-subway

批判

crítica

kritis

نقدية

critical

비판

critique

rítische

ביקורתית

riitiline

critică

Kritická

批判

crítica

kritis

5

批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

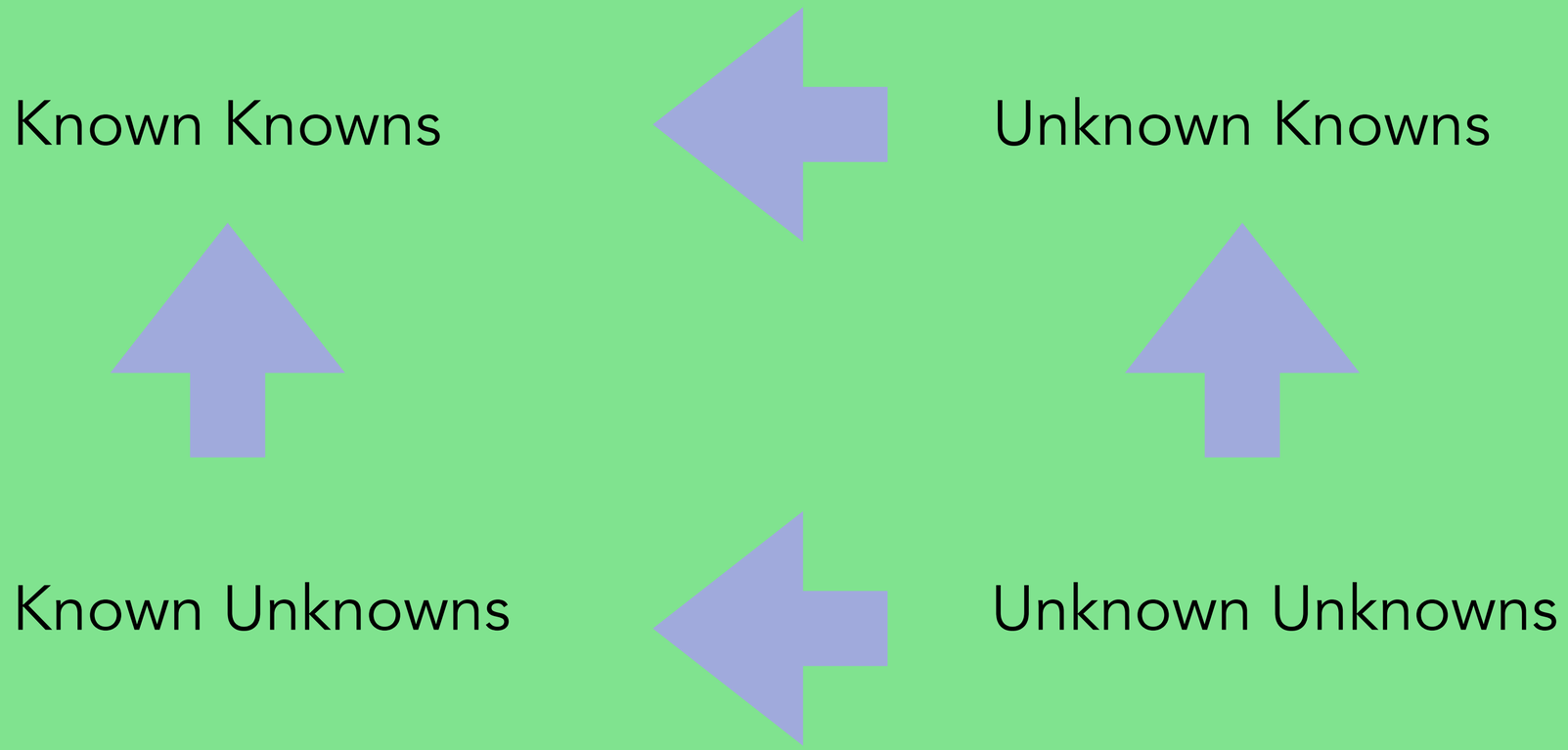
What's a good vis?

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

What is a theory in HCI/VIS?

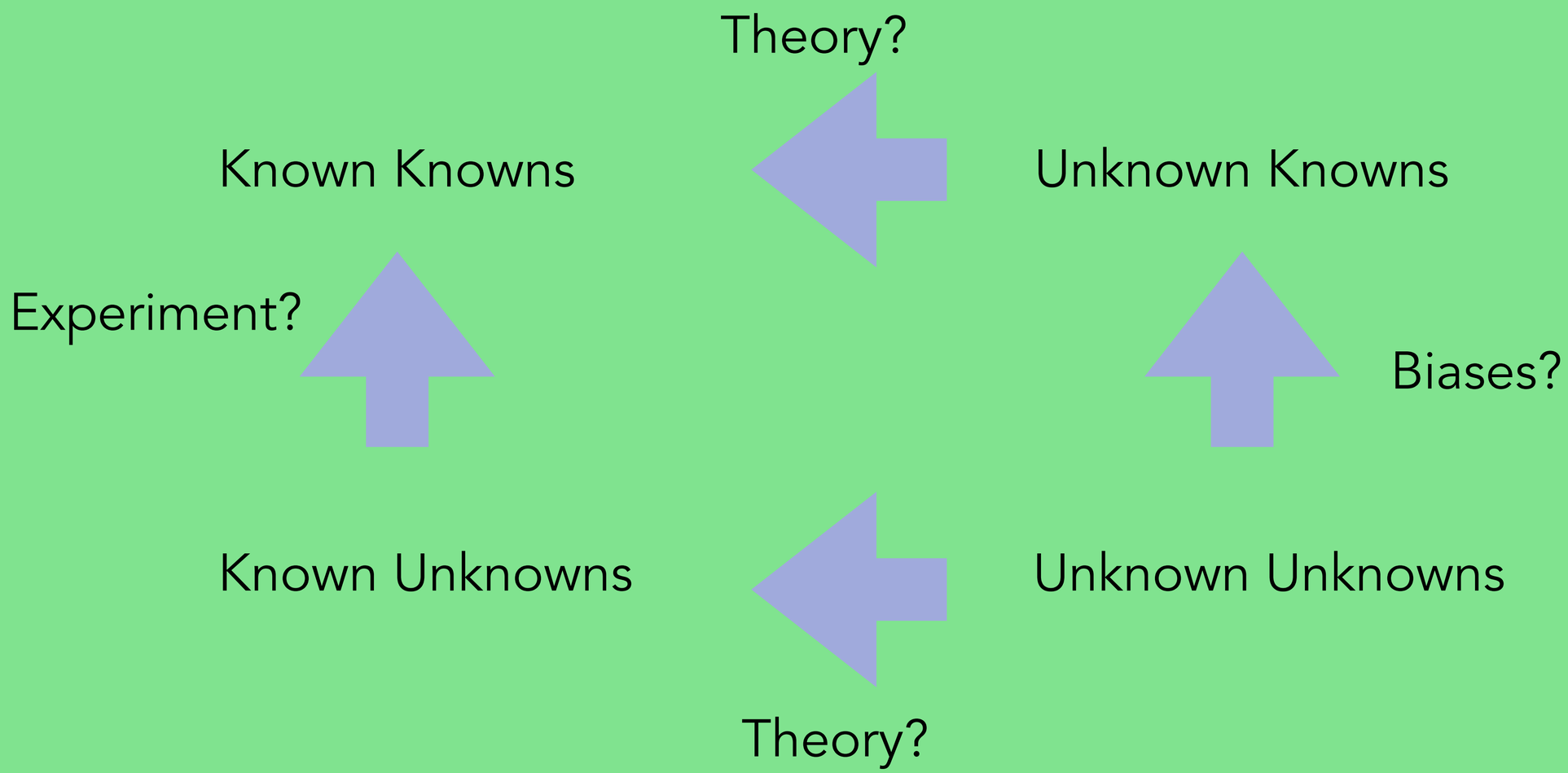
批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is a theory in HCI/VIS?



批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

What is a theory in HCI/VIS?



批判
crítica
kritis
نقدية
critical
비판
critique
ritische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is a theory in HCI/VIS?

A PhD is the process of figuring out what theory means in your field

- paraphrase of Will Crichton

批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is a theory in HCI/VIS?

批判
crítica
kritis
نقدية
critical
비판
critique
ritische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is the meaning of criticality here?

批判
crítica
kritis
نقدية
critical
비판
critique
rítische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

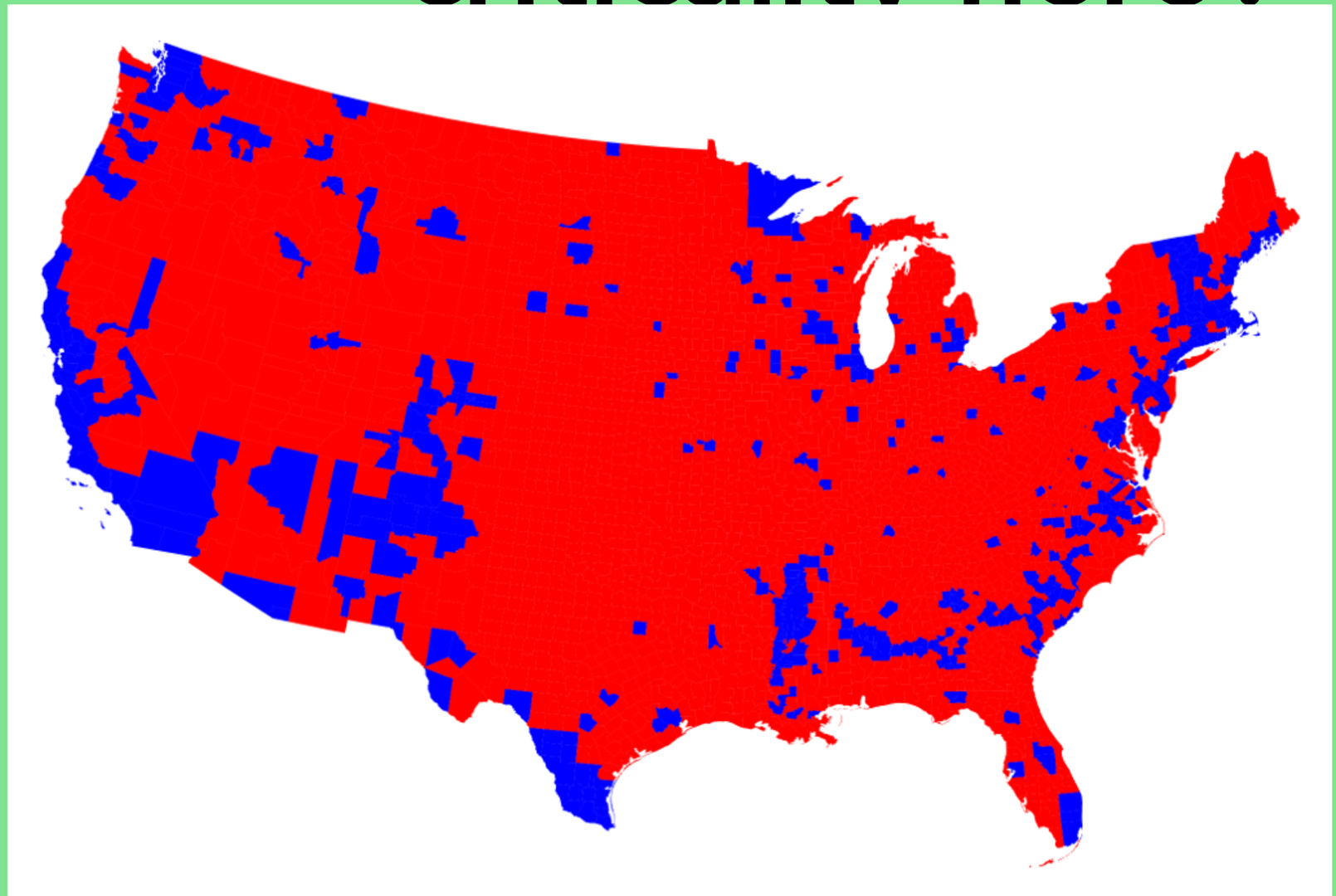
What is the meaning of criticality here?

I make it a rule never to criticize something unless I can offer a solution. - Norman

A machine that takes in external media and uses it for an effect

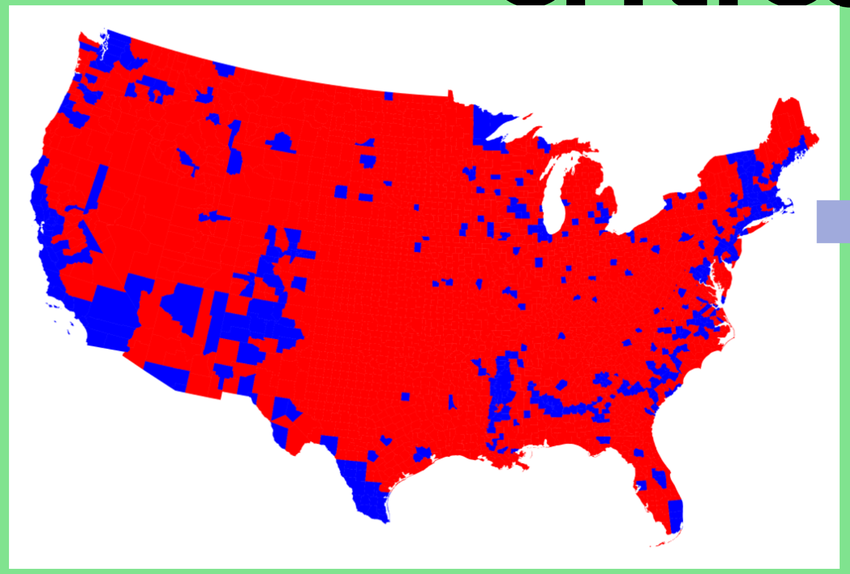
批判
crítica
kritis
نقدية
critical
비판
critique
rítische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is the meaning of criticality here?



批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

What is the meaning of criticality here?



批判

crítica

kritis

نقدية

critical

비판

critique

ritische

ביקורתית

riitiline

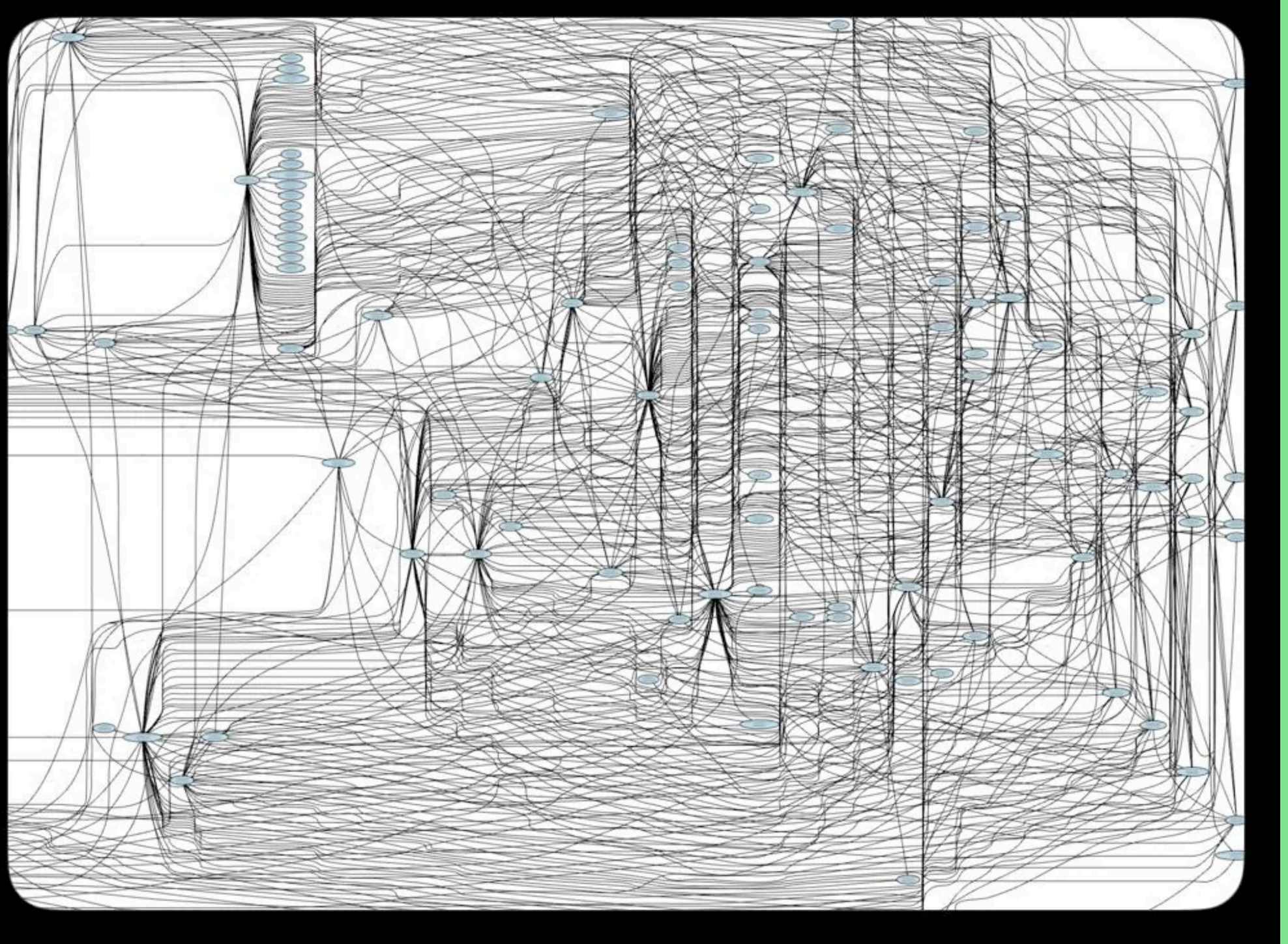
critică

Kritická

批判

crítica

kritis



批判

crítica

kritis

نقدية

critical

비판

critique

kritische

ביקורתית

kriitiline

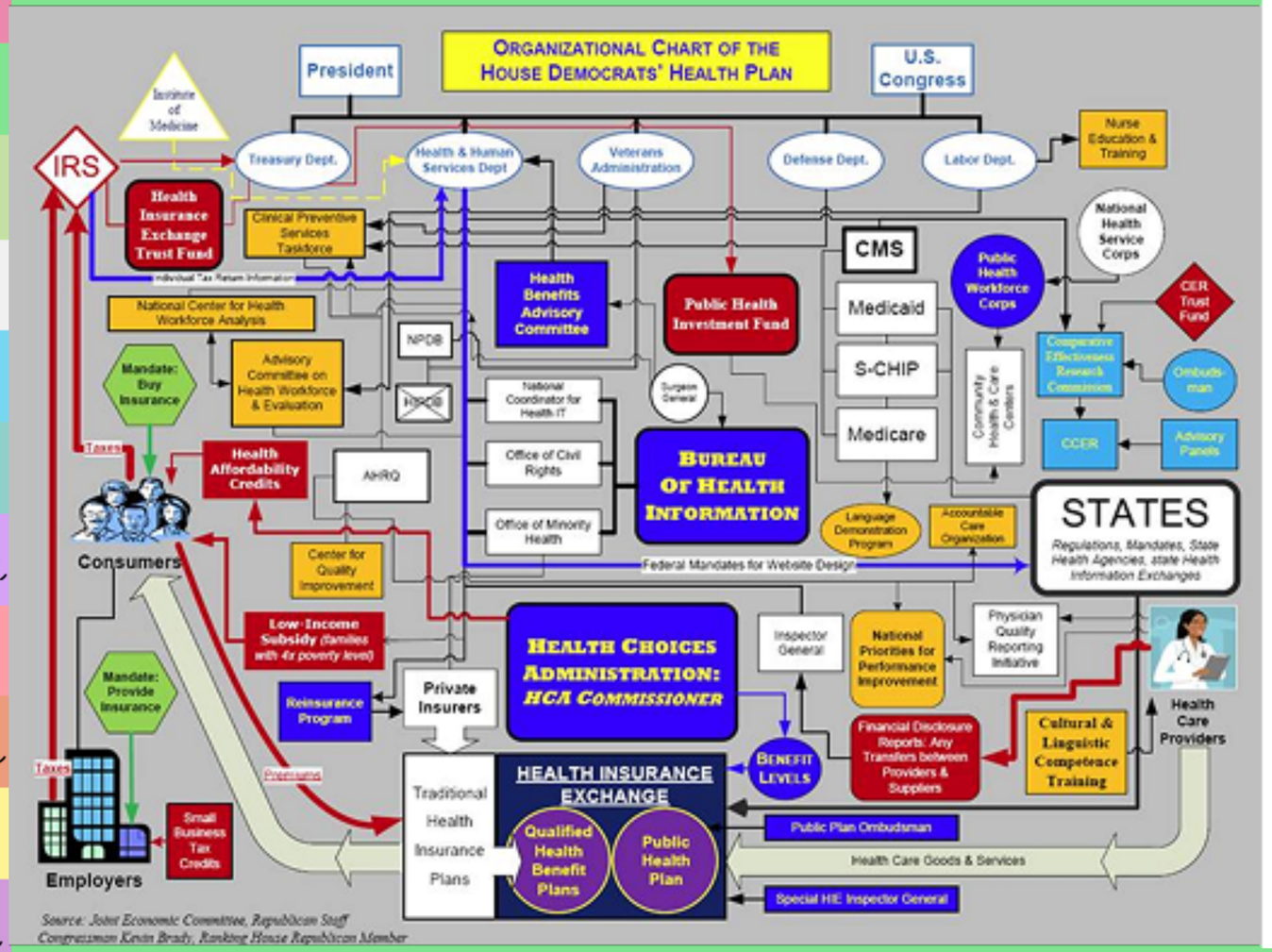
kritică

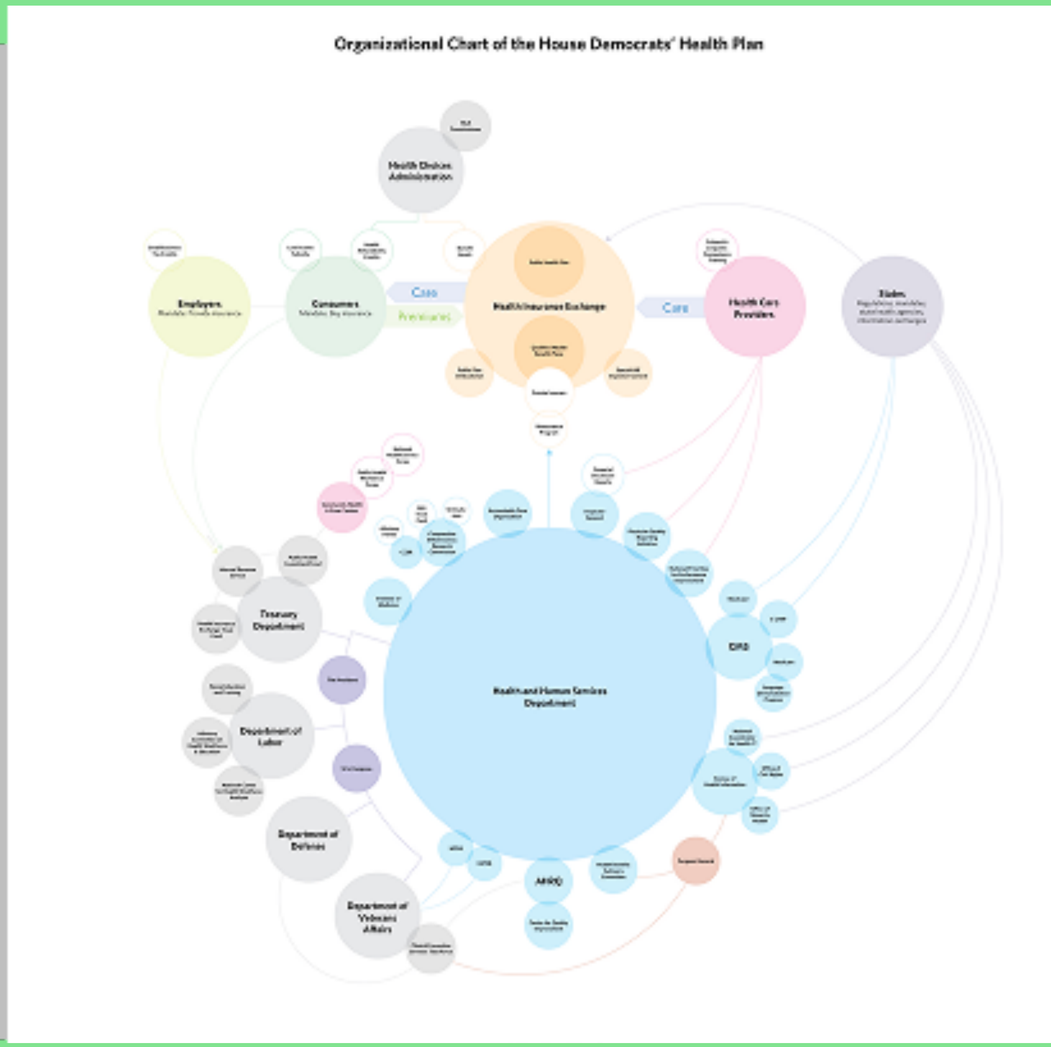
Kritická

批判

crítica

kritis





批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kritiline
kritică
Kritická
批判
crítica
kritis

		Central		East		South		West	
		Total Sales	Total Profit	Total Sales	Total Profit	Total Sales	Total Profit	Total Sales	Total Profit
Coffee	Amaretto	$14,011	$5,105	$2,993	$1,009			$9,265	$-1,225
	Columbian	$28,913	$8,528	$47,386	$27,253	$21,664	$8,767	$30,357	$11,253
	Decaf Irish Cream	$26,155	$9,632	$6,261	$2,727	$21,664	$8,767	$18,235	$-1,305
Espresso	Caffe Latte				$15,442	$11,592	$2,933	$7,502	
	Caffe Mocha	$35,218	$14,640	$16,646	$-6,230	$3,872	$20,458	$18,876	$4,064
	Decaf Espresso	$24,485	$88,60	$7,722	$2,410	$14,163	$5,201		
	Regular Espresso				$24,036	$15,384	$5,930	$30,578	$12,302
Herbal Tea	Chamomile	$36,570	$14,434	$2,194	$765	$10,062		$25,632	$8,852
	Lemon	$21,978	$6,251	$27,176	$7,901	$11,186	$3,180	$32,274	$13,120
	Mint	$9,337	$4,069	$11,992	$-2,242	$14,497	$2,593	$14,380	$4,330
Tea	Darjeeling	$30,289	$10,772	$14,096	$6,497			$28,769	$11,780
	Earl Grey	$32,881	$10,331	$6,505	$3,405			$27,387	$10,425
	Green Tea	$5,211	$1,227	$11,571	$5,654			$16,063	$-7,109

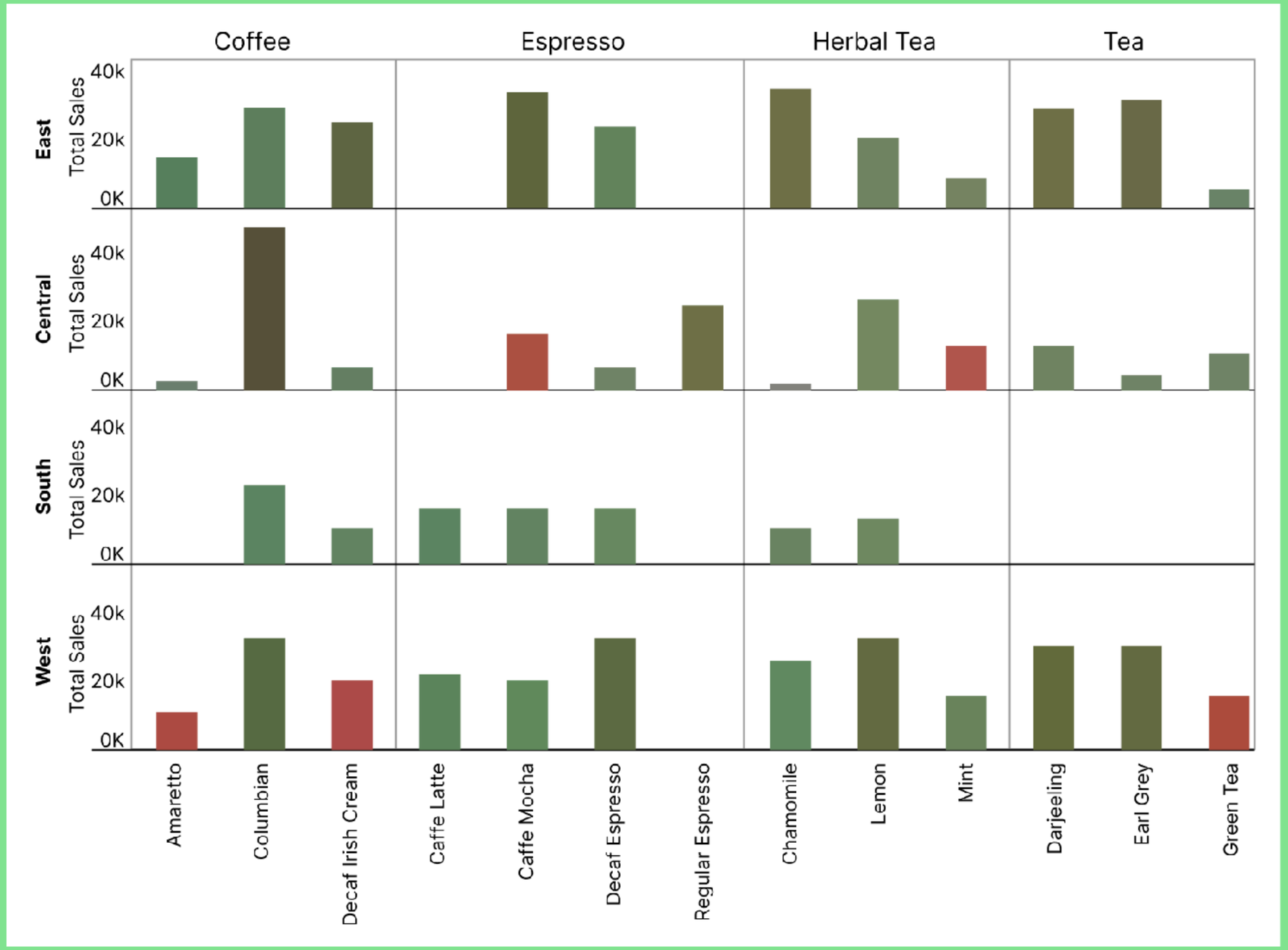
What product in what region sold the most?

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kritiline
kritică
Kritická
批判
crítica
kritis

		Central		East		South		West	
		Total Sales	Total Profit	Total Sales	Total Profit	Total Sales	Total Profit	Total Sales	Total Profit
Coffee	Amaretto	$14,011	$5,105	$2,993	$1,009			$9,265	$-1,225
	Columbian	$28,913	$8,528	$47,386	$27,253	$21,664	$8,767	$30,357	$11,253
	Decaf Irish Cream	$26,155	$9,632	$6,261	$2,727	$21,664	$8,767	$18,235	$-1,305
Espresso	Caffe Latte				$15,442	$11,592	$2,933	$7,502	
	Caffe Mocha	$35,218	$14,640	$16,646	$-6,230	$3,872	$20,458	$18,876	$4,064
	Decaf Espresso	$24,485	$88,60	$7,722	$2,410	$14,163	$5,201		
	Regular Espresso				$24,036	$15,384	$5,930	$30,578	$12,302
Herbal Tea	Chamomile	$36,570	$14,434	$2,194	$765	$10,062		$25,632	$8,852
	Lemon	$21,978	$6,251	$27,176	$7,901	$11,186	$3,180	$32,274	$13,120
	Mint	$9,337	$4,069	$11,992	$-2,242	$14,497	$2,593	$14,380	$4,330
Tea	Darjeeling	$30,289	$10,772	$14,096	$6,497			$28,769	$11,780
	Earl Grey	$32,881	$10,331	$6,505	$3,405			$27,387	$10,425
	Green Tea	$5,211	$1,227	$11,571	$5,654			$16,063	$-7,109

How much mint tea was sold in the west?

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
kritică
Kritická
批判
crítica
kritis



How much mint tea was sold in the west?

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kritiline
critică
Kritická
批判
crítica
kritis

Summary of Financial Performance

		Central		East		South		West	
		Total Sales	Total Profit	Total Sales	Total Profit	Total Sales	Total Profit	Total Sales	Total Profit
Coffee	Amaretto	$14,011	5,105	$2,993	1,009			$9,265	-1,225
	Columbian	$28,913	8,528	$47,386	27,253	$21,664	8,767	$30,357	11,253
	Decaf Irish Cream	$26,155	9,632	$6,261	2,727	$11,592	2,933	$18,235	-1,305
Espresso	Caffe Latte					$15,442	3,872	$20,458	7,502
	Caffe Mocha	$35,218	14,640	$16,646	-6,230	$14,163	5,201	$18,876	4,064
	DecafEspresso	$24,485	8,860	$7,722	2,410	$15,384	5,930	$30,578	12,302
	RegularEspresso			$24,036	10,062				
Herbal Tea	Chamomile	$36,570	14,434	$2,194	765	$11,186	3,180	$25,632	8,852
	Lemon	$21,978	6,251	$27,176	7,901	$14,497	2,593	$32,274	13,120
	Mint	$9,337	4,069	$11,992	-2,242			$14,380	4,330
Tea	Darjeeling	$30,289	10,772	$14,096	6,497			$28,769	11,780
	Earl Grey	$32,881	10,331	$6,505	3,405			$27,387	10,425
	Green Tea	$5,211	1,227	$11,571	5,654			$16,063	-7,109

What product in what region sold th

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Learning Objectives

Critical thinking
Communication
Knowledge of Relevant Theories

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kritiline
kritică
Kritická
批判
crítica
kritis

Andrew McNutt

Now

SCI
THE UNIVERSITY OF UTAH

THE UNIVERSITY OF UTAH
KAHLERT SCHOOL OF COMPUTING

Human And Visualization Oriented Computing Lab

Recently

Long ago/ tangentially

Interests

- Visualization
- HCI
- Programming Interfaces

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Activity: Background and Aim

批判

crítica

kritis

نقدية

critical

비판

critique

ritische

ביקורתית

riitiline

critică

Kritická

批判

crítica

kritis

Course structure

批判

crítica

kritis

نقدية

critical

비판

critique

ritische

ביקורתית

riitiline

critică

Kritická

批判

crítica

kritis

mcnutt.in/critical-hci-vis-class/

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Choose your own adventure

Attendance
Reading summaries

Big (8): Project, Test

Medium (4): Essay, Talk

Small (1): Post card, Help the course

Other activities can be proposed!

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

20 Points

5 Points

Choose your own adventure

Attendance

Reading summaries

Random recitation

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
kritică
Kritická
批判
crítica
kritis

Choose your own adventure

Attendance
Reading summaries

- A summary
- things you liked
- Things you didn’t like
- Things you learned
- >= 3 questions for class

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Project?

- Build something based on a critique; for example, *LLM "understanding" of different cultures notions of color*
- Explore the use of theory in context; for example how do people in VIS use CDN?
- Build a theory of some form/apply a theory in a new or novel way
- "viz as will and representation"

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Essay?

- A reflection on a topic relevant to your domain knowledge or research
- a synthesis related to course readings (although you should anticipate bringing in outside sources as well)
- a critique of a system or interface using one of our tools
- Critiquing LaTeX from a Feminist Perspective

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Talk?

- a discussion of a paper we did not read during class
- an analysis of a system
- an argument synthesizing multiple different perspectives we've considered
- “Talk on Vanguardism and Data Feminism”
- “Iris Young vs Nancy Frazer”

File a PR to schedule!

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Schedule:

For each class, there will be some assigned reading that you should do before class. Classes will involve discussions of the readings, so it is important that you do the readings.

Week 1: Introduction

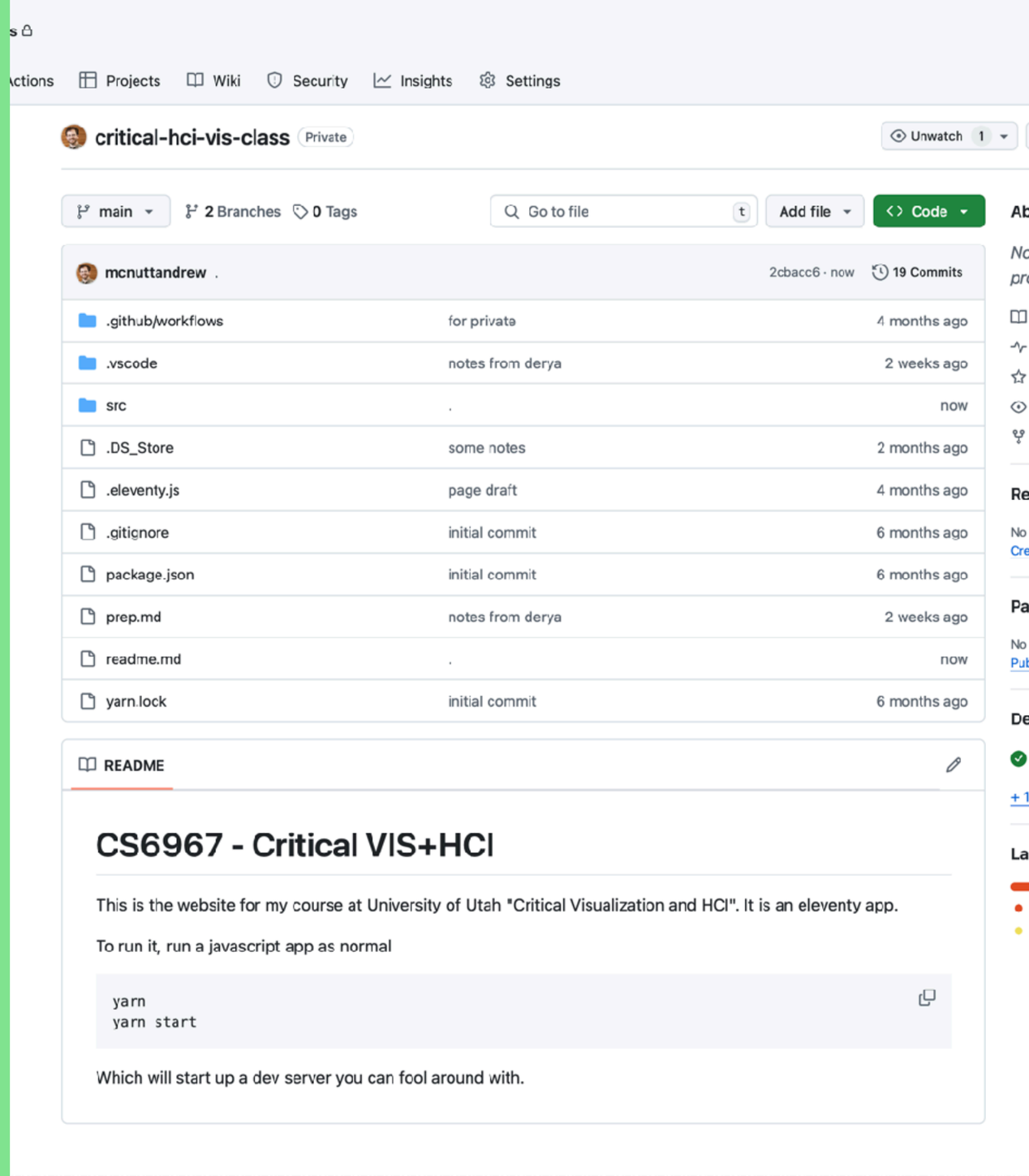
Tuesday (1/6): Syllabus day, introductory discussions and stakes setting. Slide

Thursday (1/8): Raw Data is an Oxymoron, Gitelman: Introduction. When the Body Became Data: Historical Data Cultures and Anatomical Illustration, Correll and Garrison

Mechanics

This course is populated by a collection of optional assignments. Each assignment is worth some number of points. To get additional details about different activities you might do, see below. Note that this means there is not a notion of late work in this course. **All coursework must be turned in by the last day of class before finals.**

Depending on how everyone does there may be a curve. The course staff will not know what the curve is until the end of the semester.



批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

Comments

- Do not turn in things all at the end
- Don’t be a bad citizen, there is a penalty
- Resubmissions are allowed
- **General grading policy**: don’t be disappointing
- Some policies subject to change

批判
crítica
kritis
نقدية
critical
비판
critique
rische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

don’t be disappointing

批判
crítica
kritis
نقدية
critical
비판
critique
ritische
ביקורתית
riitiline
critică
Kritická
批判
crítica
kritis

Activity: Make a course plan (and submit it)

<Activity>, <POINTS>, <Target Submission date>

Talk, 6, Feb 1…..

批判
crítica
kritis
نقدية
critical
비판
critique
kritische
ביקורתית
kriitiline
critică
Kritická
批判
crítica
kritis

See you Thursday