How will Project 3 be graded?

DSC 106: Data Visualization

Sam Lau

UC San Diego

Component	Excellent	Satisfactory	Not Satisfactory
Visual Encodings	The visualization does not violate the expressiveness criteria and the design choices (marks and encoding channels) are clear, evocative, and effective. (+3 points)	The visualization does not violate the expressiveness criteria, but another set of design choices (marks and encoding channels) could have been more effective (e.g. using the area visual channel instead of position when possible). (+2 points)	The visualization violates the expressiveness criteria (e.g. heavy overplotting, encodings that imply incorrect readings, etc.), and these violations are not addressed using the available interactions (e.g. overplotting that cannot be filtered or zoomed into). (+1 points)
Data Transformations		The visualization uses appropriate data transformations (e.g. filtering, aggregating) and clearly describes the transformations to the reader (e.g. in the subtitle of the plot). (+2 points)	The visualization used an inappropriate set of data transformations (e.g. filtering out important outliers), or did not clearly describe these transformations to the reader. (+1 point)
Interaction (Implementation)	The interactive elements of the plot are polished and are almost completely bug-free. (+3 points)	The interactive elements of the plot are functional, but some bugs impede the viewing experience (+2 points)	The interactive elements have major bugs that preclude use. (+1 point)

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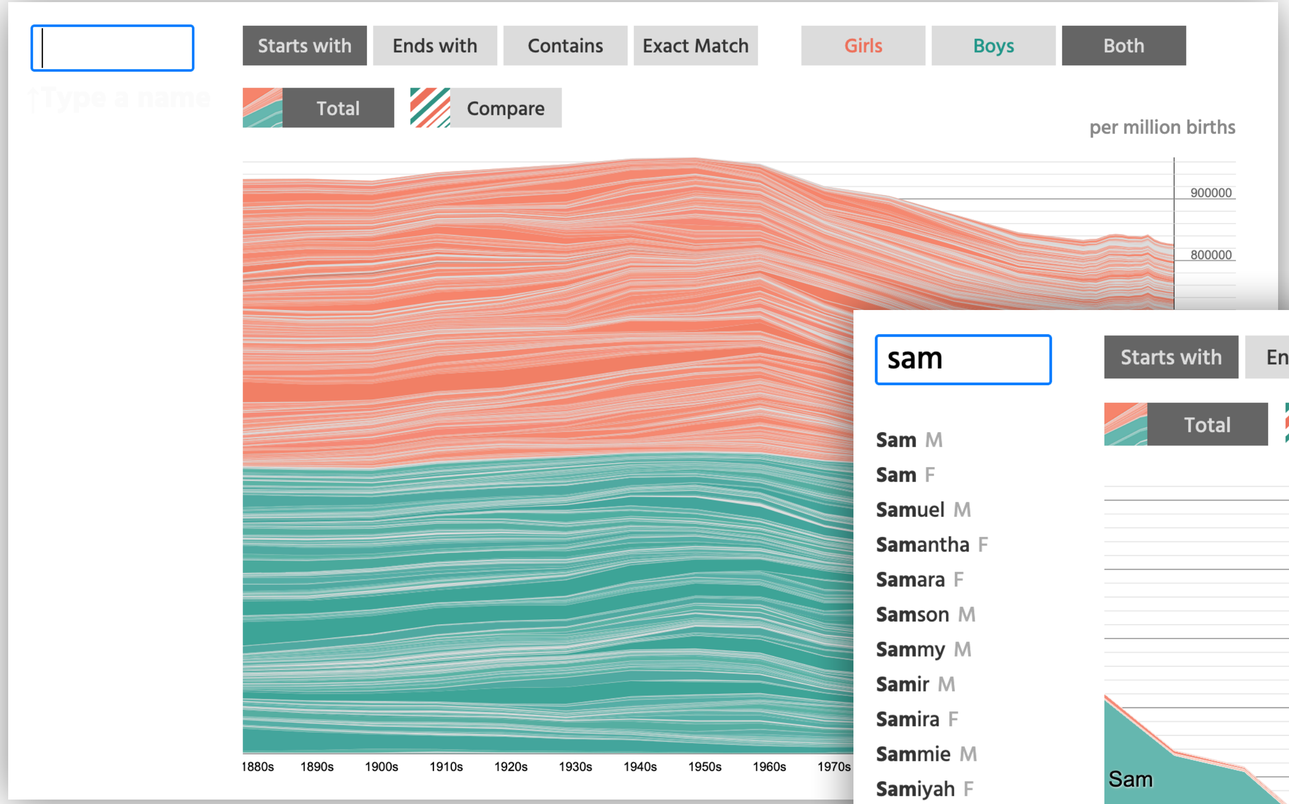
		ents of the plot me bugs xperience (+2	The interactive elements have major bugs that preclude use. (+1 point)

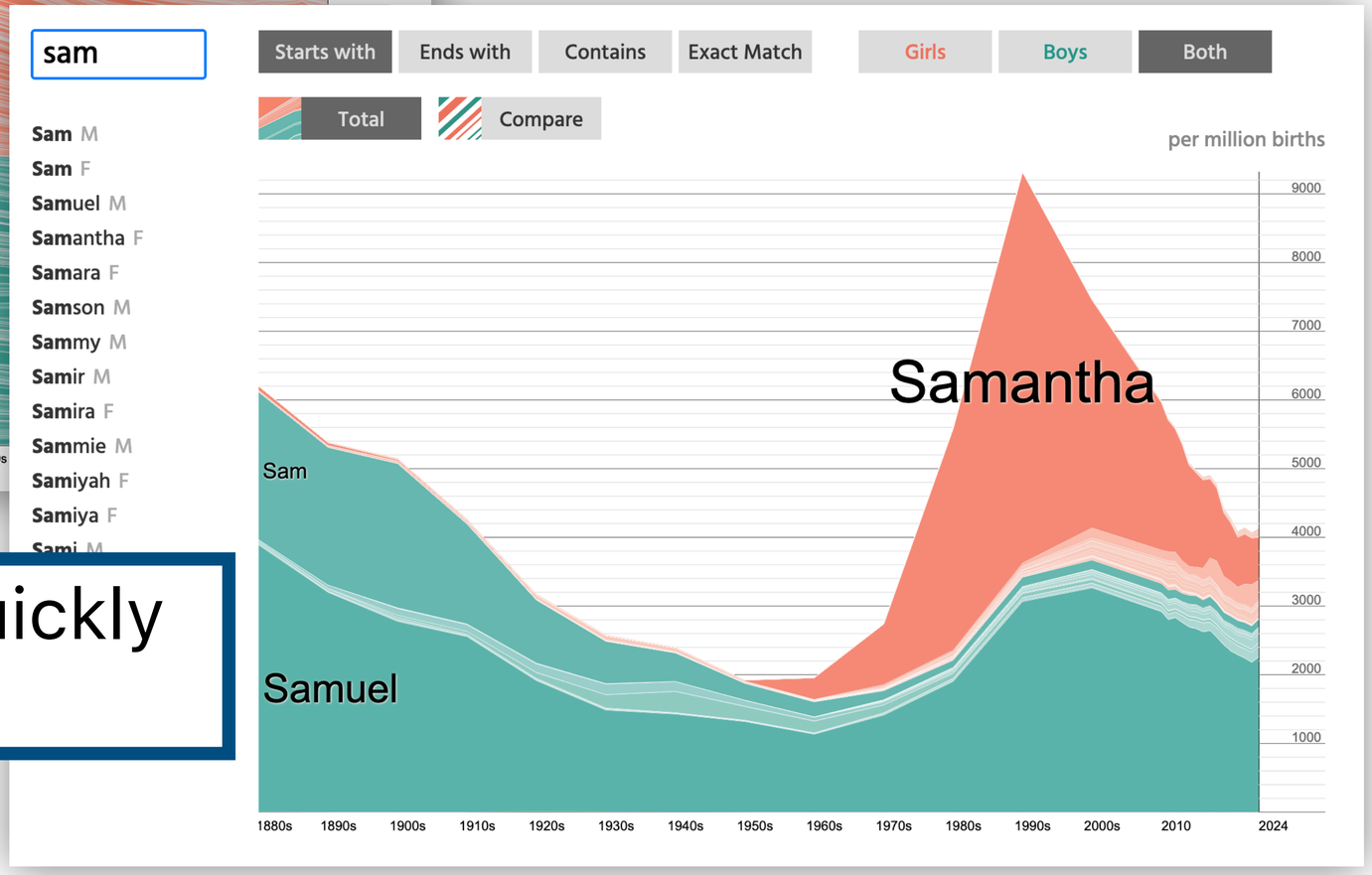
Same as previous projects. Excellent grade only reserved for **both expressive and effective** encodings.

Avoid: overplotting, ineffective channels, etc.

In Project 3, will tolerate overplotting on first page load only if interactions enable user to easily navigate.



Initial plot has overplotting...



But typing anything quickly fixes it.

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Same as previous projects.
Must describe transformations to the reader.

Interactions must work!
Excellent grade reserved for plots that don't break even when **a first-time user** (e.g. our staff!) plays around with your interface for ~5 minutes.

Hard to get an excellent grade unless **you give your plot to someone else** to try out (a peer, course staff, etc.)

For Excellent, we expect **mostly lag-free interactions** (at least 15 FPS with a good internet connection).

			atisfactory
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		data transformations (e.g. filtering,	inappropriate set of data
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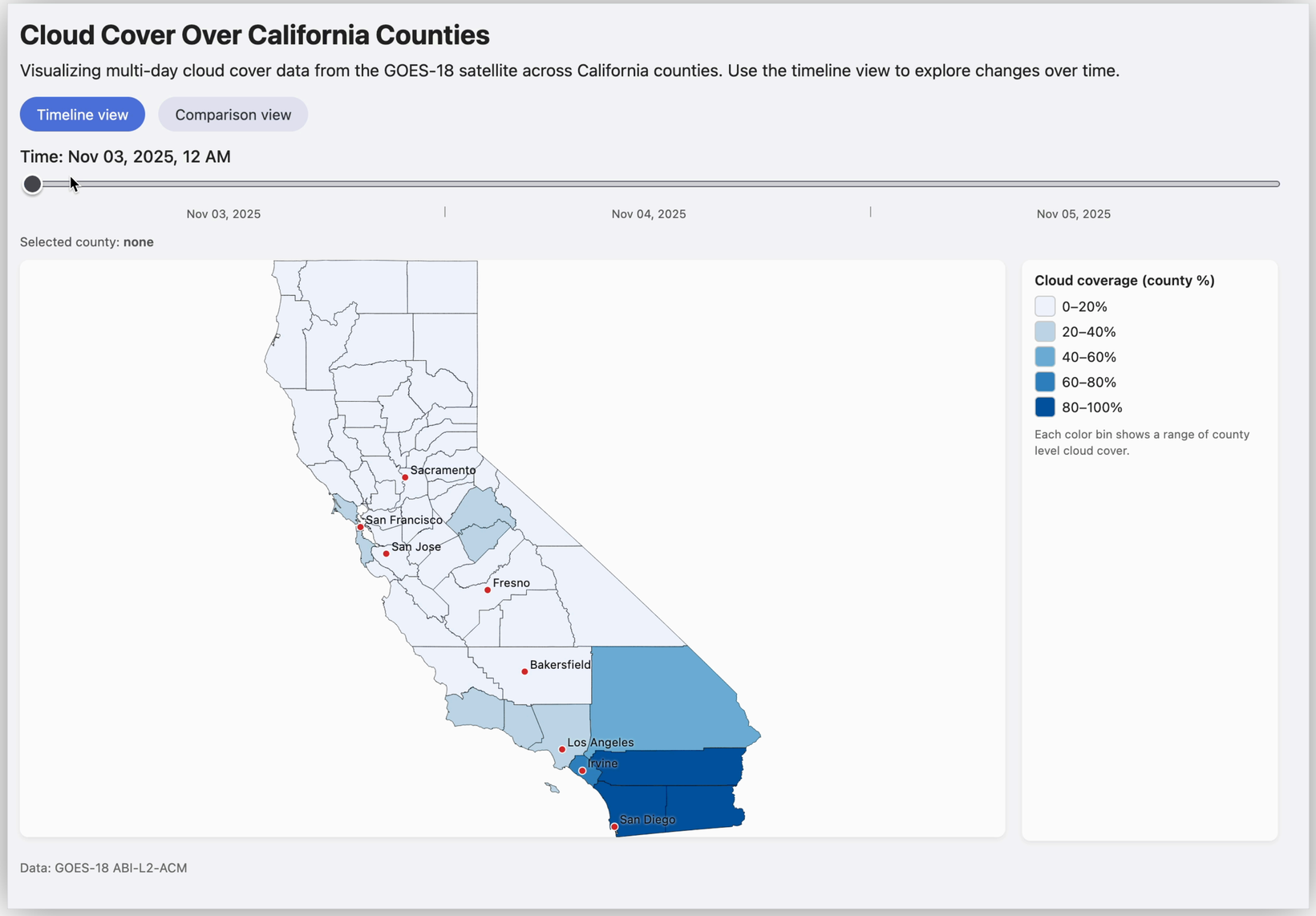
Interaction (Design)	The interactive elements guide the reader to quickly and easily discover interesting patterns in the data that would not be apparent in a static plot. (+3 points)	The interactive elements enable the reader to discover interesting patterns in the data, but a static plot (perhaps with a different encoding) could have conveyed the same information just as effectively. (+2 points)	The plot would have been substantially more effective as a static plot without the interaction. (+1 point)
Writeup			points)
Creativity and Originality	The submission exceeds the assignment requirements, with original insights or particularly engaging visualizations. (+1 bonus point)	The submission meets the assignment requirements. (+0 points)	

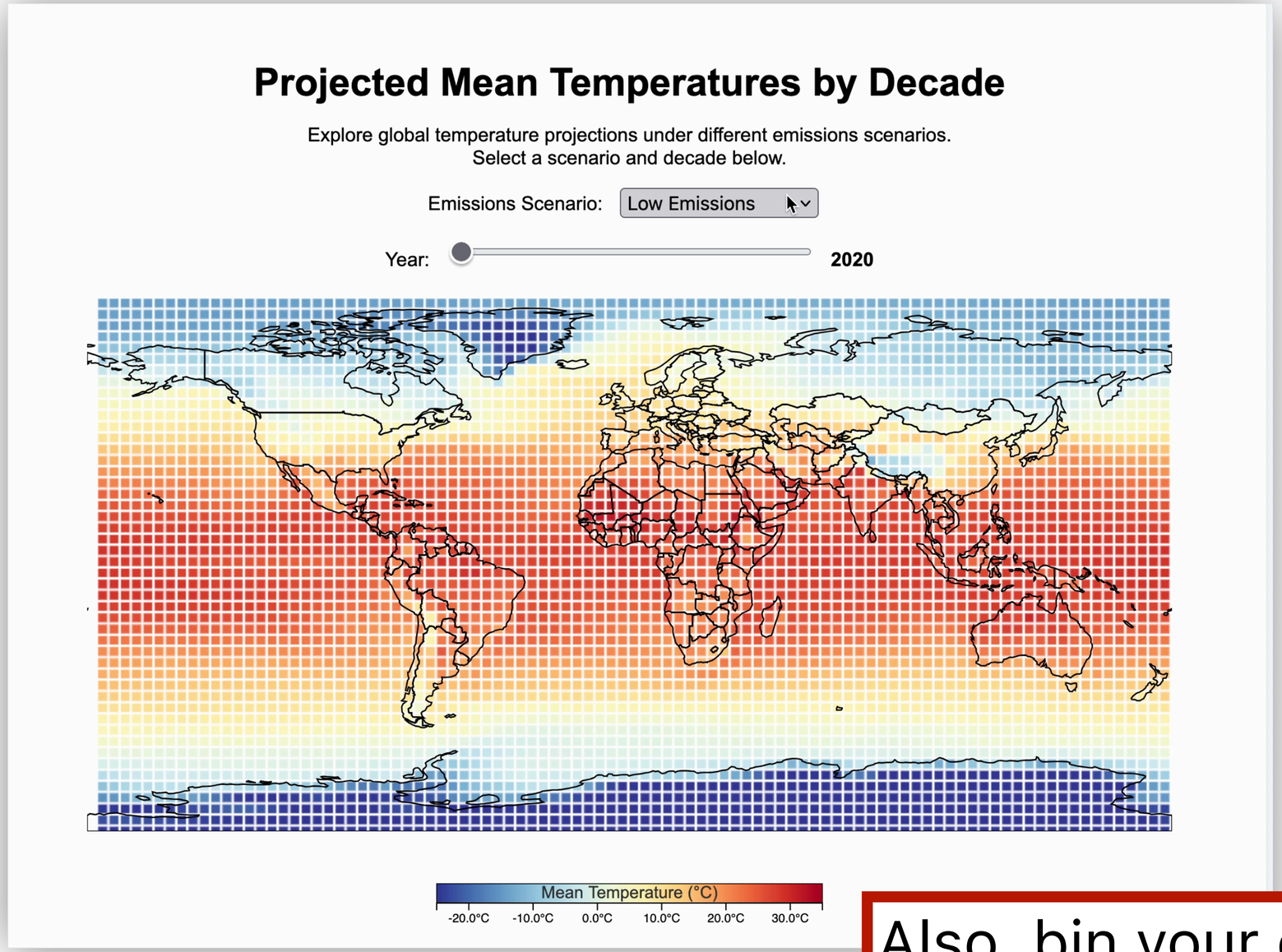
Interactions **must provide value**!
When grading, we will always ask: "Could the same information been shown effectively in a static plot?" If yes, caps your grade at Satisfactory.

Examples of what NOT to do:



Would have been more effective if plotted as small multiples.

Examples of what NOT to do:



Does the reader learn anything new about the data from the interactions?

Also, bin your colors!

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Writeup		The writeup clearly describes the motivation for the visualization and the rationale for its design decisions (e.g. the visual encodings, data transformations, color palette, etc.). It also contains an overview of the team's development process. (+3 points)	One or more required elements of the writeup has major issues (e.g. rationale misses important parts of the visualization design), is missing, or is clearly generated by an AI tool. (+2 points)
Creativity and Originality			bonus point)

As usual, describe your motivation and what you were trying to achieve. Don't forget about the team development process!

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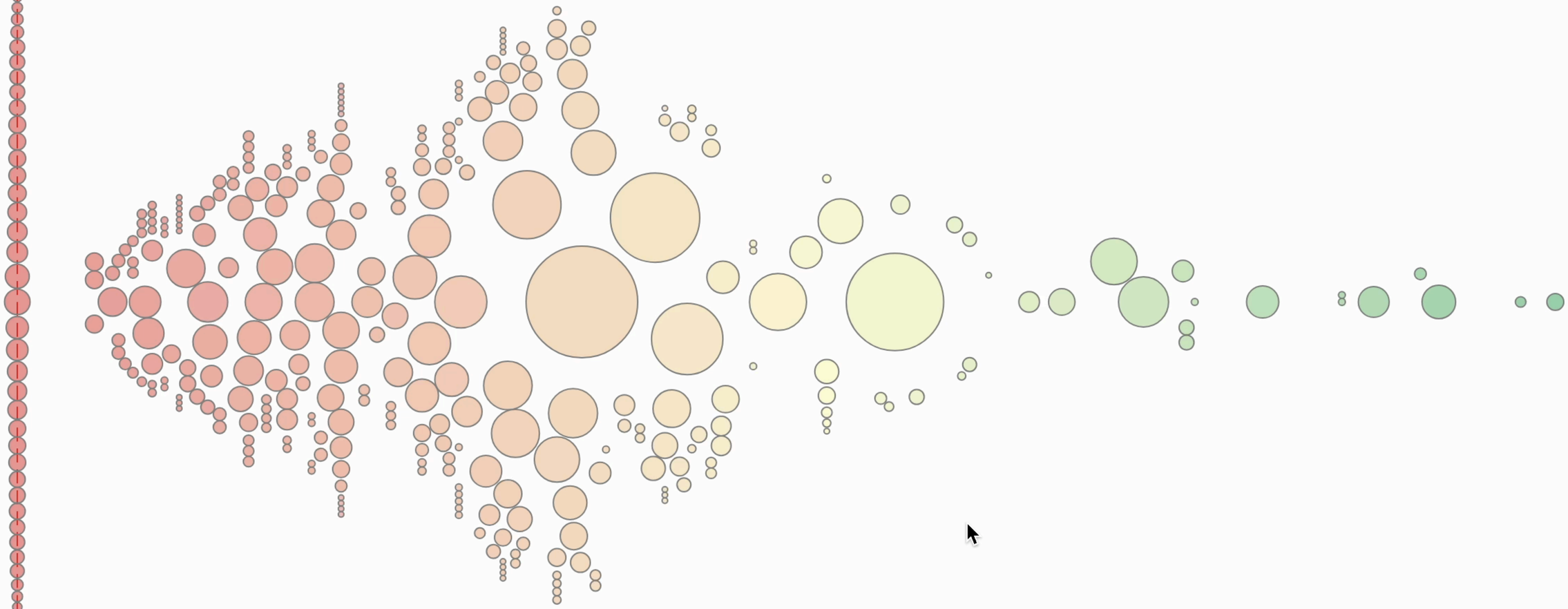
Creativity standards are as usual. Think about current news, outside data sources, nifty interactions, etc.

Award-Winning Project 3 Submissions (from the past)

When our words are used

Hover, click, search, and scroll through the vocabulary of 1360 Facebook comments on a POTUS post announcing the creation of 14 million jobs. Only includes words that appear in 10 or more comments.

Search here

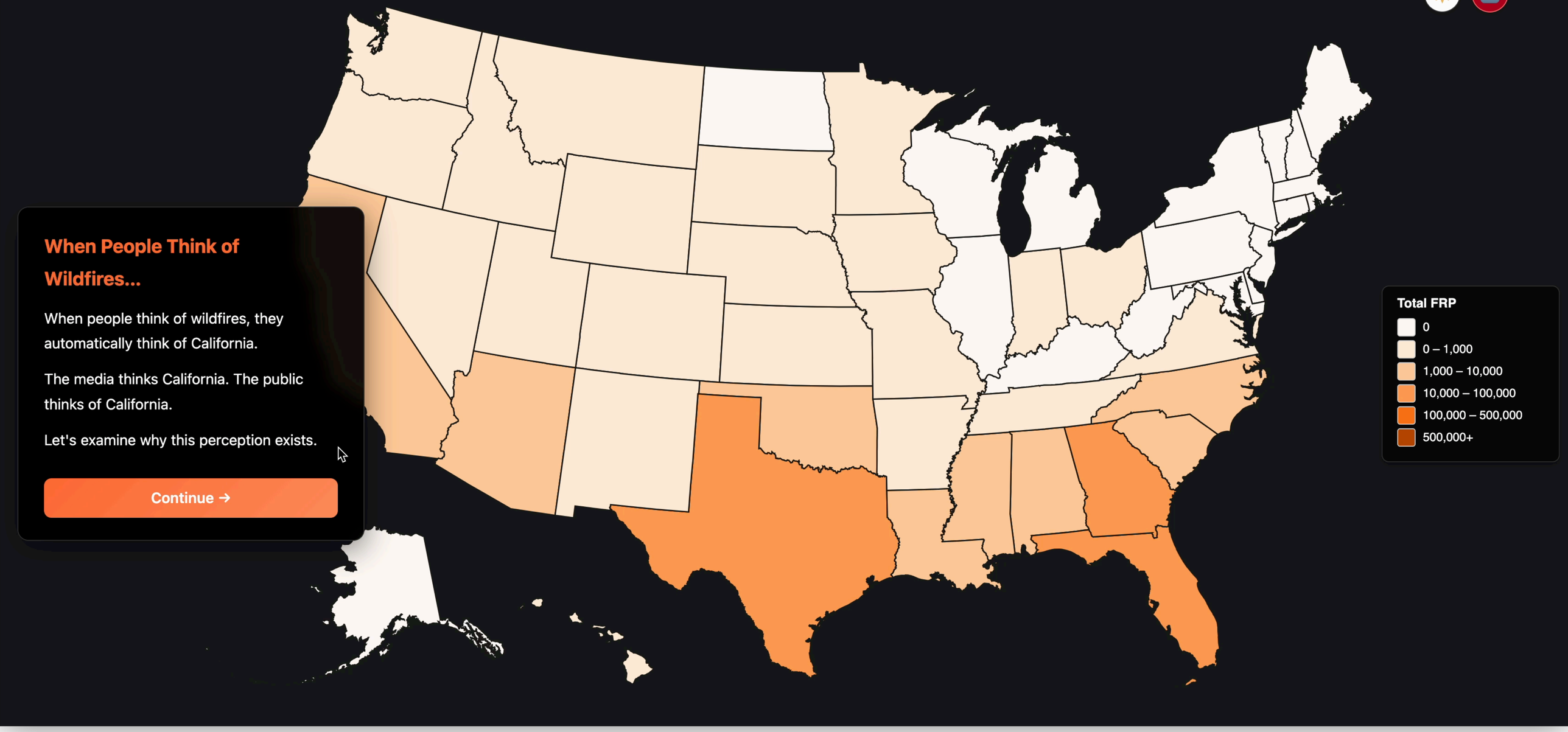


Chris Lum

https://ch-lum.github.io/comment-vis/

100% Negative | 90% Negative | 80% Negative | 70% Negative | 60% Negative | 50/50 | 60% Positive | 70% Positive | 80% Positive | 90% Positive | 100% Positive

Final Project Prototype - United States: Active Fires (2024)



Adit Gautam, Jaden Goelkel, Noah Neuweg, Dylan Dsouza

https://dylandsouza.com/america-on-fire/

How good are humans at gauging their actual vs. perceived stress?

Hongn, A., Bosch, F., Prado, L., & Bonomini, P. (2025). *Wearable Device Dataset from Induced Stress and Structured Exercise Sessions* [Data set]. PhysioNet. (Version 1.0.0). https://doi.org/10.13026/zzf8-xv61

Understanding how well people can assess their own stress levels is crucial for mental health awareness and effective stress management. While we often rely on self-reported stress measures, these subjective assessments may not always align with our body's physiological response to stressful situations. This disconnect between perceived and actual stress levels can impact our ability to recognize when we need to take action to manage our stress effectively.

This interactive visualization compares an observed stress metric, derived from physiological signals, with self-reported stress levels. We focus on a stress induction protocol from the *Wearable Device Dataset from Induced Stress and Structured Exercise Sessions* (Hongn et al., 2025).

Various measurements, including heart rate, electrodermal activity, and blood volume pulse, were collected through a wristband during an experimental protocol. Each phase of the protocol is designed to either induce or alleviate stress through specific tasks and recovery periods. The protocol is broken down into 7 phases:

Baseline: A 3-minute period at rest used to establish a physiological reference point.

TMCT: A modified Trier Mental Challenge Test that involves time-

First Rest: A 5-minute recovery period following the TMCT, allowing participants to begin returning to baseline levels.

Real Opinion: Participants share their genuine opinions on controversial topics, introducing a social-cognitive

https://clemhubble.github.io/jecc-stressors/

Claire Wang, Jason Tran, Emily Yip, Clement Ho