**M5 Presentation**

**Part 1: The What (Domain) 4 minutes (We might be able to go on for 5 minutes)**

So, we could start this part off by talking about our domain.

-*What’s important for an outsider to know about it to understand why it’s important to study it?* It’s simple. We can start by talking about wanting to show the importance of climate change, and the importance of understanding what causes it. People raise criticisms that climate change isn’t a fact, while we see that clearly, based on our data, it IS happening (We would show them a temperature map from 1990 and one from 2001). As a matter of fact, Exxon has been paying off people to raise criticisms about it since the 1980s. So clearly, our data shows that climate change IS in fact happening. Now, is it due to the CO2 levels, or not? That’s the next step of our visualization.

-*What dataset are you using within the domain?* We obtained our temperature data from the NOAA website. Unfortunately, the temperature data was only available state-by-state, so we had to download data for all 50 states. And then to facilitate the process, we wrote a script that would aggregate all of the data for all 50 states into one CSV file. As for the CO2 data, we obtained it from the EPA website, which included an excel file that contained data for all 50 states. **Do we mention the fact that we trimmed out the breakdown of the CO2 data or nah?).** Both data sets contained the state names with the corresponding average Temperature and CO2 values for each year. This is a good data set for our project, because it contained the averages for the entire year by state, which is exactly what we needed.

**Parth, did you say there was a regulation that came out in 2001? Maybe we can talk about that too?**

//Done talking about the dataset. I think this alone can easily take 3-4 minutes. So we’re done with this section. Next.

//**I think I can tackle this part and talk about it. Or maybe both Parth and I could do it.**

**Part 2: The Why (Tasks) 3-4 minutes**

/\* I feel like we won’t have enough to talk about here, but we can definitely get 3 minutes of the “Why” in. Talk about tasks like analyzing trends, comparing patterns. I’ll pull this up from M2 report. \*/

The M2 report reads:

-Compare and summarize different pieces of information associated with each state and observe changes in weather trends correlated with the CO2 emissions generated by each state over time.

-Compare trends in temperature by each state over 2 decades to see if there is indeed an increase in temperature.

//I feel like this part won’t take more than 3 minutes. **I think it would be best if Parth talked about the tasks because him and kenny came up with those so he can talk more about that part better than me.**

**Part 3: The How (Idiom) 6 minutesC**

Basically talk about the idiom, and then show it.

-*How does the idiom encode important attributes?* It does so by using a light to dark color scale. We used the rule of thumb of “Get it right in black and white” as a basis for our encoding.

-*What design decisions did you have to make, and why did you make this choices?* Initially, we were considering with going with a double line graph. However, since we ran out of screen real estate, we decided to come up with another way of representing a similar type of data. The outcome? A hovering table that is dynamically displayed when the user hovers over a state, which displays the values over a range of years.

*-How does your chosen idiom manage the complexity of the data through manipulation, facets, or reduction?* Our chosen idiom manages the complexity of the data by mapping the values to a percentage of the two color choices we picked for each graph. This way, when a higher value is displayed, the luminence (or is it saturation) decreases and results in a darker shade of the state. However, when a lighter value is displayed, the luminence increases and results in a lighter shade of the state.

***Give us an example scenario demonstrating how your system works, either through a sequence of screenshots, video, or demo so we can see it in action.***

**-->I got this (Shafiq), I can cover the above part 3 stuff too if Parth wants!**