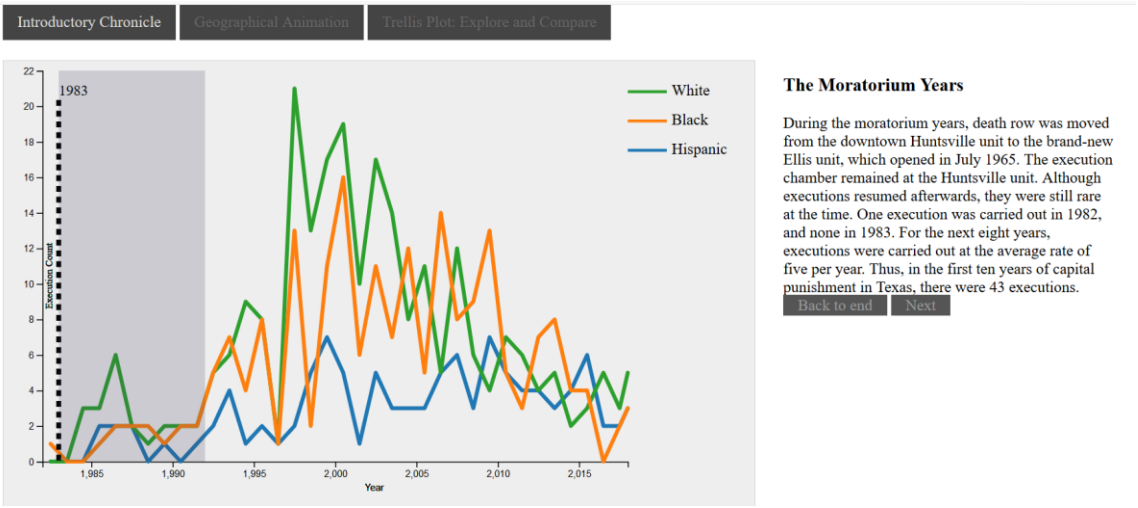
CS 465: Final Project – Design Choices
Tianzhi (Lambus) Li and Aiko Hassett

In this story-telling piece, we decided to work with execution data from Texas. We thought this would provide some interesting insights regarding the history of executions and the shift in United States' general attitude towards death penalties.

We tried to keep the visualization in sync. Making sure that we had simple, comprehensible colors to highlight the information we wanted the users to focus on and using monotonic colors for other parts to create a nice contrast.

Slide 1: Introductory Chronicle



We wanted to start off with a simple overview of the data we were dealing with, trying to allow room for the viewers to ease into the data. First, we chose some distinct colors to distinguish between the different races. We added some text on the side to assist the users in navigating through, providing interesting historical details as the user clicks through the text.

Since this covers nearly 40 years' worth of data, we decided to highlight specific sections depending on the section described in the text to make our visualization clearer and more comprehensible.

Whenever important events are mentioned in the text, we indicate that year by a dotted line, adding text at the top of the line for clarity. We experimented a lot with the visual choices in this slide. We first tried using lines to represent the span, but we felt that it was visually more appealing and less disturbing to append a semi-opaque rect and associating all the vertical lines to indicate specific events.

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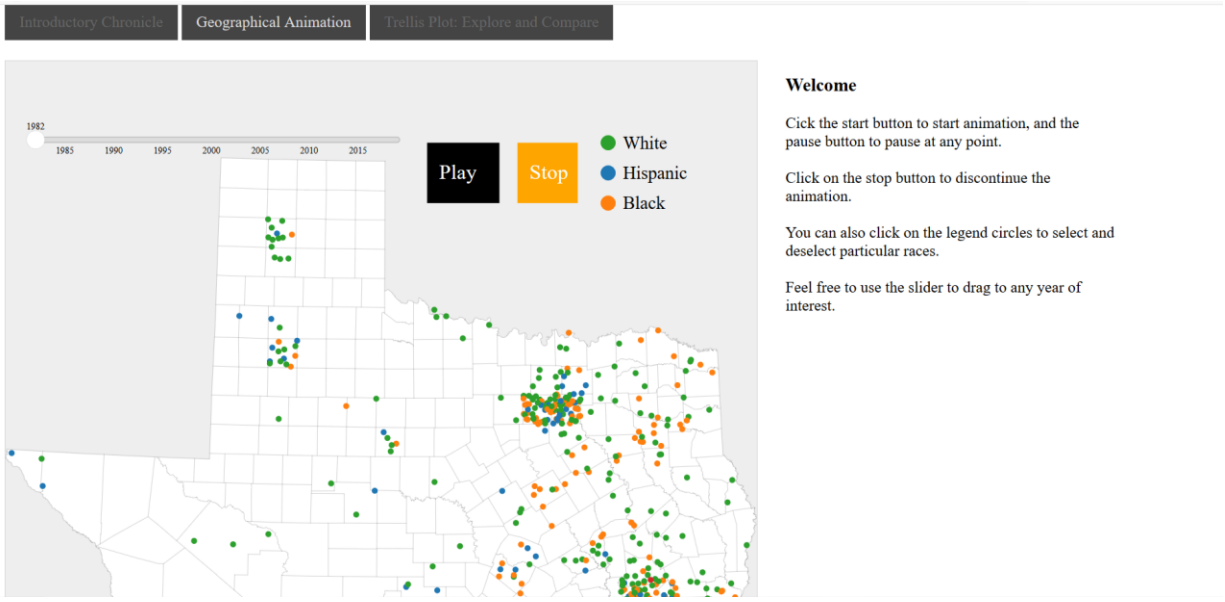
Slide 2: Geographical Animation



Our primary motive to add this page was to show where the executions were taking place, while also breaking this down by year so that the users see the change in execution numbers over the years. After tossing around different ideas about the ways in which we could potentially animate this, we decided to use a slider that allows users to either click on the play/pause button to control the animation while also giving them the freedom to use the circular handle on the slider to slide to a point of interest. We again wanted to emphasize the difference in race through color and give the user the freedom to click on different items in the legend to filter down the data to something more race-specific. This animation was also very much inspired by the TED video we watched during one of our lectures early in the semester, where a man narrated as the visualization ran. Similarly, we automatically pause the animation when it reaches important points, showing text to provide more context.

After creating these components, we realized that it might be nice to add a stop button that allows users to reset the animation at any point. Although the animation shows the geographical and yearly distributions of executions quite nicely, it lacked the opportunity for users to see what all these points summed up to. By adding this button, we were able to solve this issue.

We wanted to keep the general format of the page with visualizations on the left and text to the right, so here we added some instructions on how to navigate the page to the right of the page.

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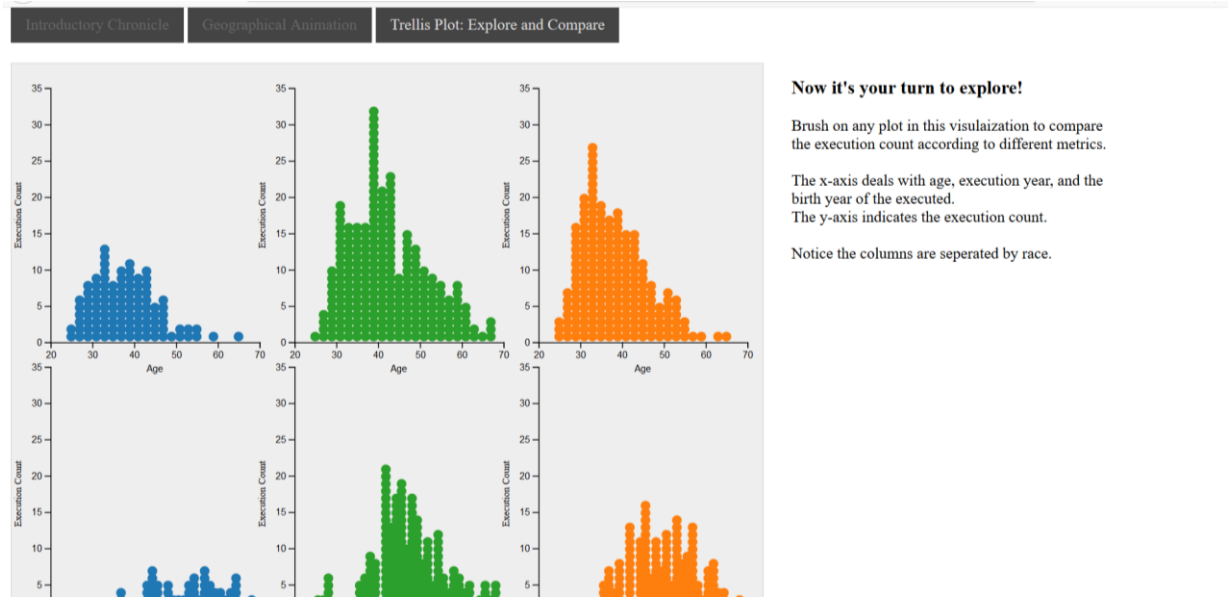
Slide 3: Trellis Plot: Explore and Compare



In our final slide, we wanted to give the users more control. Now that they were equipped with the facts, we provided a 3x3 Trellis histogram plots that visualized the data depending on age, execution year, and birth year of the executioners according to its respective race. Through this we wanted to explore several things. One was to identify high points and low point sin our datasets and see whether there was any correspondence across metrics. To make the exploration process easier, we added a brush to each plot. Any brush from each row can be selected/deselected, while the other two plots react to the section being selected, changing their representations accordingly.

Again, we added a text to the righthand side with instructions on how to navigate through the visualization, allowing the users to dive into the exploration process smoothly.