**\*Designate Person To display Slideshow\***

**Speaker 1:**

**Opening Slide - Tornados: A Force of Nature**

**Slide 2: Team members Introduction**

**Slide 3 : What is a Tornado?**

A tornado is a powerful and destructive weather phenomenon that occurs when there is a collision between strong winds and thunderstorms . It is a violently swirling column of air reaching from a thunderstorm to the ground. Although it is just simply air which normally can not be seen, we process of what a tornado is through the condensation funnel of water droplets, dust, and debris.

The collision of warm, moist air and cold, dry air causes tornadoes. When these two air masses meet, they create an area of low pressure, as the warm air rises through the colder air, which can cause the air to start spinning. As the rotating updraft draws in more warm air from the thunderstorm, its rotation speed increases. This spinning air turns into a tornado when it comes into contact with the ground.

**Slide 4: Tornados in the USA: Our What and Why**

Our objective was to analyze and graph tornado data in the USA. We believed it was important to identify the areas most prone to tornadoes and understand their impact on communities. The results will be visually displayed to raise awareness and promote informed decision-making.

**Speaker 2:**

**Slide 5: Thought Process (RICHARD’s PORTION on Thought Process of project)**

**Slide 6: Displays our EF Scale**

As with the original scale, the EF-Scale is a 6-point scale that goes from zero (weakest) to five (strongest). Its adoption unites the approach to wind damage assessment in both Canada and the United States.

The EF-scale employs a large number of damage indicators, ranging from residential housing to office towers to trees. Wind speeds are more accurately related to wind damage thanks to a process that involved the meteorological, engineering and architecture communities.

You will be able to see the first representation on our dashboard which illustrates the magnitude of various Tornados in terms of EF. As you hover over the bar charts you can see number of tornados with respect to the year as well as the quantity and severity. We also included a drop down menu, which allows you to go to scroll to desired year and see the tornado count, fatalities, and injuries.

**Speaker 3:**

**Slide 7: Displays our plotted map visual**

In the second visual we have plotted tornado information that has occurred in We have all this information starting from the 1950’s all the way to 2021. You will be able to see where the majority of the tornados take place as you scroll the various years. Each Tornado point can be clicked to view which state, the EF Scale level of magnitude, the length and the width of the tornados. We found this visual the best representation of where the cluster of tornados occur.

**Slide 8: Displays our Charting Distribution of States and Month**

We took it a step further in our third visual to gather a more accurate breakdown. Here we were able to list the top 10 states that experienced the most Tornados for every year, and you will be able to see exactly the frequency as you hover over the orange bars. In the bottom portion we have created a monthly distribution graph to demonstrate which experience the most amount of tornados.

**Speaker 4:**

**Slide 9: Limitations**

As data analyst students we encountered limitations and challenges in completing this project.

One of the challenges being understanding how the various components, tools, programs can be brought and linked together to create a dashboard.

We also had to undergo a few discussions on how to approach and tackle the various requirements and components to building it piece by piece.   
  
Because tornados have been around for a long time, our data set was between 1950-2021, we had to decide if we wanted to break down this data to make a smaller representation such as only one decade, multiple decades or the entirety of the dataset. We had to figure out how 55, 000 sets of data points might not take a away from the story we are trying to illustrate, because otherwise it would look like one giant cluster.

**Slide 10: Conclusion & Real Life Connection**

With the information we have gathered and graphed through means of our dashboard, with a high degree of certainty we can say that the majority of tornados that occur take place in the Southern part of Central United States. Through the completion of this project, we were able to attain the knowledge that the months that experienced the most amount of tornados in Central United States was between April-June, with Texas being the State which had the most occurrence.   
  
For you and I, this information can help us in the real world as time of going on vacation or even buying property.   
  
This can be translated into big picture concepts such as Public Safety and Emergency Response in catastrophic events. Urban planning, in terms of how to minimize losses when a tornado strikes, with also other factors such as agricultural impacts, risk management and pollution effects.

**Slide 11: Questions**