# Stat 436 Peer Review Assignment

## Portfolio Assignment – Tornado Analysis App

This application summarizes tornado tracking data in the United States. The application’s goal is to highlight the frequency of tornadoes across the US as well as the effect the tornado’s width has on its travel distance. It does this by using a bar graph to show the frequency of tornadoes across the months of the year, a scatterplot to show the width vs travel length, and a table to highlight specific tornado data. Additionally, an input box to select specific states, a selection for EF ratings, and a slider for year values are provided to filter the data by these metrics. Each visualization is updated accordingly, with the scatterplot and bar graph highlighting the filtered results in red.

I found the graphs to provide enough insight into some of the overall questions about tornadoes across the US. This includes questions like:

* What months are the most frequent for tornadoes?
* What widths produce the most travel distance?

With some additional work on my part, I was able to answer questions like

* Which states have the highest count of tornadoes?
* What years say the most tornadoes?

The inputs to the graphs were easy to use but I wish the graphs went into more detail on the filtered data. Specifically, the bar graph only highlights the filtered data in red rather than redoing the plot to only show said data. By re-rendering the plot with the data, I would be able to see the total frequency of tornadoes better and get greater insight into what I was looking for.

My only suggestion for the application would be to include another visualization that allows for easier comparison between states since that would greatly help with answering some of the questions I posed above.

## Project Milestone – Type 2 Diabetes Risk Interface

This project provides insight into the risks associated with Type 2 Diabetes. The tool provides an interactive way to see the different metrics and what the greatest causes of Type 2 Diabetes are. Through the use of a boxplot and density graph, specific metrics can be compared between non-diabetics and diabetics. This allows for easy comparisons and is helpful for visualizing the differences between the groups. A heatmap is used to show an overall comparison between the different metrics to show which ones have the highest correlation to Type 2 Diabetes.

The tool is a great way of analyzing the causes of Type 2 diabetes and allows for an in-depth comparison of the metrics between diabetics and non-diabetics. The additional text and hover statistics provide specific information on what data points there are as well as how to interpret certain data. This allows for easy interpretation of the comparison results and helps with getting specific information. The one thing I would like to see is more specifically the correlation between factors shown in the heatmap. By including an additional visualization that showed the correlation between different factors I would be able to better understand what part of the metrics impact the chances of getting Type 2 diabetes. For the most part, the visualizations are very in-depth and provide a detailed representation of the diabetes data and really help with answering questions surrounding the different metrics.