**Australia Weather Analysis 2009 – 2016**

**Files:**

**weatherAUS.csv**

**AU\_BRUSHFIRES.xlsx**

Our main objective for the Tableau analysis was to visualize which cities in Australia had the least and most amount of rainfall and which factors contribute to rainfall. For the years 2009 – 2016 we determined the top three cities that had the highest rainfall on average were Cairns, Darwin and Coffs Harbour. The cities that had the least amount of rainfall were Alice Springs, Uluru and Woomera.

Viewing our bar graph on worksheet Rainfall(mm) by Month/Year by City we see there was not much of a trend between the years. Also, there was no way to really determine which years would be getting more rainfall in terms of doing a forecast for future years. For example, 2011 had the highest average rainfall and 2014 had the lowest average rainfall. There, was an increase in rainfall between 2014 and 2015. However, when looking at our data in terms of the location we do see a trend, worksheet TOP 10 Most Rain by Year. Cities located along the coast received higher rainfall on average; such as Cairns, Darwin and Coffs Harbour. Cities located more inland; South Australia and the more inland parts of New South Wales received less rainfall.

Based on the Heatmap shown in our model analysis\_LR.ipynb, the factors that had the most impact on rainfall were humidity at 3 p.m. and sunlight. Our created worksheet, Rainfall(mm) VS Humidity VS Sunshine Month/Year shows the average humidity, sunshine and rainfall for each city and for each month between 2009 – 2016.

We were able to gather data for the history of brushfires in Australia, AU\_BRUSHFIRES.xlsx and add that with our data from weatherAUS.csv. We created a map on worksheet Bush Fires vs Rainfall to visualize the amount of brushfires and rainfall in cities occurring over the eight years. We determined that the amount of rainfall was not the main factor that contributed brushfires in Australia.