Project 2 proposal

**Contributors**

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For project 2, the team has decided to collect data on shark attacks globally and

then only filtered for USA states, we are also going to get ice cream data in the US

states.

Data Sources.

* Shark Attack CSV: sharkattackfile.net
* Ice Cream Shop API: googleapis.com/maps
* Open Weather API: https://openweathermap.org/api

We will be reading the shark attack data using pandas and then cleaning the data

by only selecting the columns we need, dropping NAN values and dropping the

index. This data will then be imported into PostgreSQL for manipulation.

We are looking to join the ice cream store locations and current weather to shark attacks based on the locations.

\*\*This is amended from our original proposal based on pay rates for needed weather data, so we added ice cream locations along with current rather than historical weather data

**Final Technical Report**

**Extraction**

We pulled data on international shark attacks reported to a central reporting repository via [www.sharkattackfile.net/incidentlog.htm](http://www.sharkattackfile.net/incidentlog.htm). The data available was in CSV format and extensive.

We then used a Google API to locate ice cream shops in within roughly 1 mile of each location. This was done using a Google API call.

Finally using the Open Weather API we pulled current weather for the specific locations

**Transformation process**

Shark Attack Data

The extensive data regarding shark attacks is of interest, however, since there appears to be no required format for submission and goes back over 100 years, extensive clean-up was necessary. See attached Source to Target document

Ice Cream Shop Data

We used the latitude and longitudes of each location in the shark attack csv to locate ice cream shops within roughly a one-mile radius to then create a new data frame to be loaded into our database. Little transformation was done with this

Weather Data

Again using the locations from the shark attack data we pulled current weather data. Little transformation was done with this data.

**Loading process**

Both data sets were cleaned using pandas.

The data from the shark attacks was already in a CSV format. The cleaned version was loaded into PostgreSQL after creating the table shark\_attacks

The data from Google API was also saved into a CSV file after the transformation process using Jupyter lab. This was then also loaded into PostgreSQL after creating the table ice\_cream.

Once in PostgreSQL we joined those two tables into ice\_cream\_sharks on the location of attack.