

1.88 Million Wildfires

Exploratory Data Analysis

Kaggle Link

<https://www.kaggle.com/datasets/ratatman/188-million-us-wildfires/data>

Python: Connect to SQL File and View the Tables

```
import pandas as pd
import sqlite3

# Load DB
conn = sqlite3.connect(r"C:\Users\raven\Desktop\[06] Temp_Projects\1.88M_wildfires\FPA_FOD_20170508.sqlite")
#shortcut to the connection cursor
c = conn.cursor()
```

```
# Pull Tables from DB
query = c.execute("SELECT name FROM sqlite_schema WHERE type = 'table'")
tables = query.fetchall()
print(tables)
```

Python: Convert SQL table to DataFrame

```
# Fires SQL Table to Pandas DataFrame
df_fires = pd.read_sql_query(f"SELECT * FROM Fires", conn)
```

```
# Check bottom 5 rows
df_fires.tail()
```

	OBJECTID	FOD_ID	FPA_ID	SOURCE_SYSTEM_TYPE	SOURCE_SYSTEM	NWCG_REPORTING_AGENCY	NWCG_REPOI
1880460	1880461	300348363	2015CAIRS29019636	NONFED	ST-CACDF	ST/C&L	
1880461	1880462	300348373	2015CAIRS29217935	NONFED	ST-CACDF	ST/C&L	
1880462	1880463	300348375	2015CAIRS28364460	NONFED	ST-CACDF	ST/C&L	
1880463	1880464	300348377	2015CAIRS29218079	NONFED	ST-CACDF	ST/C&L	
1880464	1880465	300348399	2015CAIRS26733926	NONFED	ST-CACDF	ST/C&L	

5 rows × 39 columns

Python: Drop Unneeded Columns and Export CSV

```
# Drop columns
df_fires.drop(columns = ["FOD_ID", "FPA_ID", "SOURCE_SYSTEM", "NWCG_REPORTING_AGENCY", "SOURCE_REPORTING_UNIT", "NWCG_REPORTING_UNIT_CODE"])
# Count of columns/fields
df_fires.columns.nunique()
```

18

```
# Export to CSV - Overwrite
df_fires.to_csv("C:/Users/raven/Desktop/fires.csv", index = False)
```

1.88 Million Wildfires: Exploratory Data Analysis



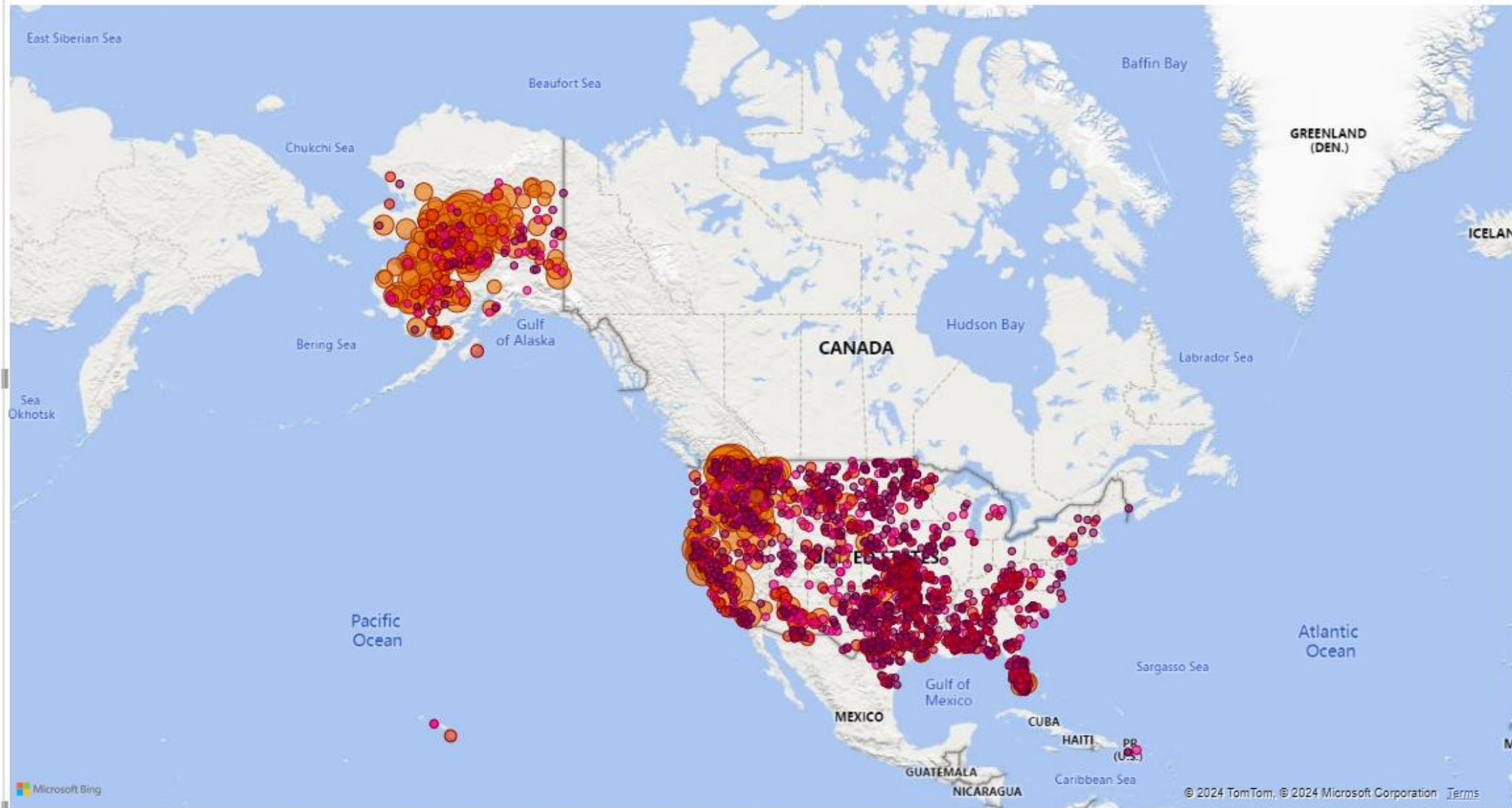
FIRE_YEAR

2015

Fire Size

All

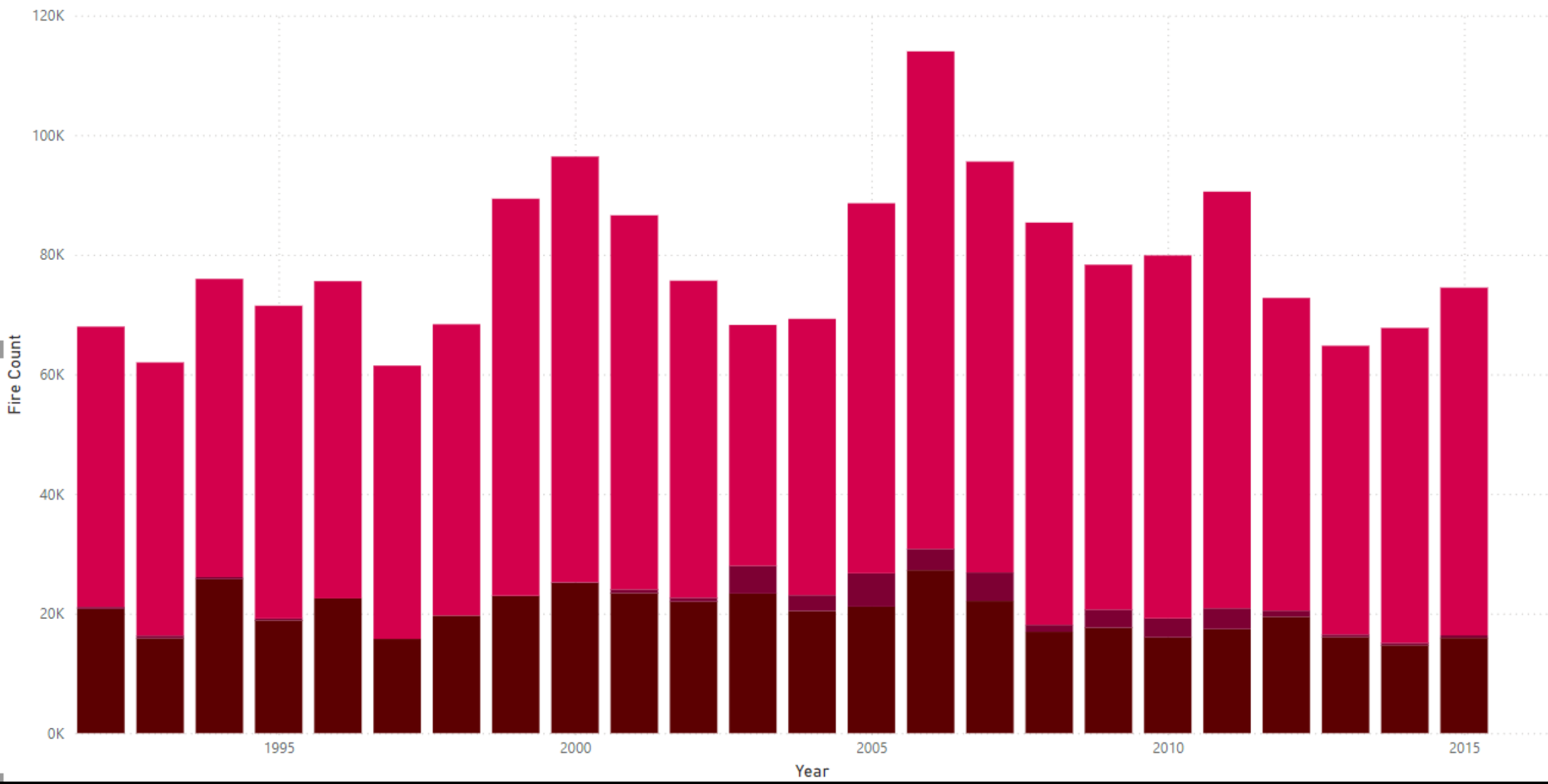
Fire Size ● A ● B ● C ● D ● E ● F ● G



Fire Count by Year and Reporting Source



Reporting Source ● FED ● INTERAGCY ● NONFED



Fire Count by Cause

Cause

- Debris Burning
- Miscellaneous
- Arson
- Lightning
- Missing/Undefined
- Equipment Use
- Campfire
- Children
- Smoking
- Railroad
- Powerline
- Fireworks
- Structure

Fire Count

0.4M

0.3M

0.2M

0.1M

0.0M

Fire Year

Cause

1992

2015

