Project Title: Rise of Fire-Proof Tumblers

Team Members: Crystal, Carmen, Israel, Jenny

Project Description: We are researching the rise of Stanley tumblers, comparing over time and region, and the color popularity.

Research Questions:

History of Stanley Cup:

According to a Today Show article from Jan 9th, 2024, This 110+ year old company, **Founded in 1913 by inventor William Stanley Jr**., built the company based on the invention of the all-steel, double-wall vacuum bottle. The Stanley bottle has had a loyal following, however, the company

has been gaining notoriety ever since a popular self-proclaimed “mommy blogger” posted about the Stanley Tumbler product in 2017 and in response, the company issued a series of pastel colors to market where sales skyrocketed. Sales have consistently increased from $73 million in 2019 to $750 million last year, 2023, which peaked our group’s interest and the next question...

As you can see from the slide, Stanley has top popularity in Utah both 20 years ago and even 5 years ago according to Google Trends data, changing to a much more broad comparison in the past 12 months, with heightened interest from the south from states like West Virginia and Mississippi.

Through a geographic data analysis we were able to hone in on the top 10 states which showed the highest interest in Stanley Tumblers based on the Google Trends data.

To further our understanding, we decided to compare the same trends for the top two competitors of Stanley, Yeti, and Hydro Flask.

As we can see here Yeti has a stronghold in Michigan whereas Hydro Flask has a noted stronghold on West Coastal states such as Oregon, and California.

However, we see interesting changes happen after the Viral video popularity.

For Stanley we see

<https://www.today.com/food/trends/stanley-cup-craze-rcna132901>

Jan. 9, 2024, 1:46 PM CST - By [Joseph Lamour](https://www.today.com/author/joseph-lamour-tdpn257755)

1. How has the influencer market impacted the searches for this product?
   1. Using Google Trends and articles (to get timeline)
      1. Using those data frame and article dates
      2. viral video posted 11/15/23 username @danimarielettering currently at 96.9m views as of 09/18/23
      3. Jack Caravanos, a professor of public health at New York University who specializes in lead exposure research; he conducted tests on Stanley cups and found that while lead is present, it's sealed within the base of the cup and not readily accessible to users, minimizing the risk of exposure. Story was published on CNN on January 26th <https://www.cnn.com/2024/01/26/health/stanley-cups-lead-wellness/index.html>
   2. Line graph/ Histogram
      * Time of the viral video
2. Where in the US do people search for Stanley tumbler the most?
   1. Using Google Trends
      1. Compare Stanley, Yeti and Hydro Flask
   2. Pie chart
   3. Boxplot graph w/ outliers
3. When do people search for Stanley tumbler the most?
   1. Using Google Trends
      1. Compare Stanley, Yeti and Hydro Flask
   2. Line graphs
      1. Over the past 5 years
      2. Within a year (holidays)
4. Which colors between cream, black, or pink are most popular based ratings/reviews?
   1. Rating/reviews from Amazon
      1. Pull cream reviews
      2. Pull black reviews
      3. Pull pink reviews
      4. Can use review dates to gauge popularity (e.g. groupby)
   2. Correlation graph (p-value) – look at bar graph (frequency)
   3. correlation graph would be size w/color preference or rating w/color
   4. all sizes w/out color
   5. drop size but compare colors w/ratings
   6. pick star rating against size or color – easy correlation graph

Datasets to Be Used:

* Google Trends CSV (time/region)
* Rating/reviews from Amazon

Rough Breakdown of Tasks:

* Extracting data – Israel & Crystal
* Cleaning up data – Jenny
* Pandas/ Matplotlib
* Analysis

\*\*When did the lead story get published?

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\*\*When did the viral fire video get published?

Viral video posted 11/15/23 username @danimarielettering currently at 96.9m views as of 09/18/23