

Project: Anthony Bourdain's Travels
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Project 3 Group 2

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Data: <https://www.kaggle.com/datasets/michaelbryantds/anthony-bourdain-episode-locations?resource=download>

Project Goal: Analyze the travels and show exploits of Anthony Bourdain.

Project Questions:

1. Is there a difference in episode count per season as the shows went on?
2. Do we see any trends in the areas or countries of his travels?
3. How much distance did he travel during the shows?
4. What was Anthony Bourdain's top show?

Analysis Summary:

Data cleaning – the data was already in decent useable shape but after looking at the two spreadsheets we were able to determine that the second spreadsheet was a duplicate with less info in it so we dropped it. Turning our attention to the main file we dropped 4 columns, reformatted another column and renamed one as well.

After the data was cleaned, we converted it to both a json and sqlite for further exploration. We made a few graphics in a jupyter notebook to give us ideas for our visualizations needed in javascript. Which helped us retune some of our research questions. After doing a general overview we took a deep dive into the data utilizing ydata_profiling. This gave us an interactive way to look at the data quickly, looking for correlations and finding clues on topics to investigate. We also took steps to try and calculate the distance that Anthony Bourdain traveled while filming the show.

Analysis Results:

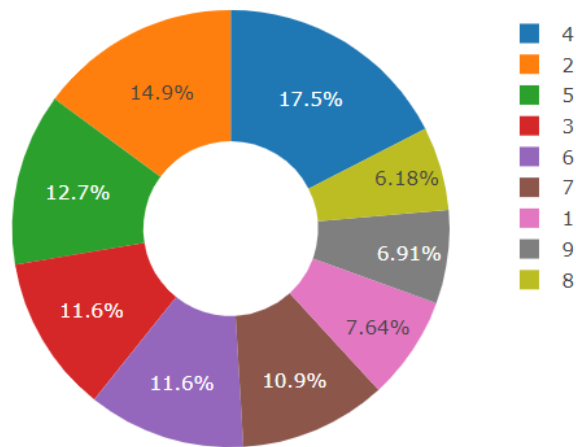
1. Looking at Anthony Bourdain's longer running shows, No Reservations and Parts Unknown, we found some conflicting information. In Parts Unknown the first two seasons and the last two seasons had more episodes per seasons than the middle seasons; however, in No Reservations the seasons had the opposite where the first season had one of the smallest number of episodes while the middle seasons had many more and sometimes doubling the count for example season 1 had 21 episodes but season 4 had 48 episodes. As the show ran on the later seasons began to decline in the number of episodes as well. A Cook's Tour only had two seasons but season 1 had 10 more episodes than season 2. Finally, The Layover only had 2 seasons but both seasons only had 10 episodes. Thus, we were unable to reach a discernable pattern for our hypothesis which was that as the show goes on longer seasons would have more episodes as the show gained popularity.
2. Anthony Bourdain traveled all over the world but lived in New York City. After looking at the regions he visited the most we came to find out that the area most visited by Anthony Bourdain was in North America but more specifically the United States.

3. With the limited information that we had we were only able to determine the minimum distance that he traveled, meaning if he started in New York City and just traveled to each of his destinations in order, came out to be 2,772,900.91 Kilometers which is 1,723,000.74 Miles.
4. Anthony Bourdain's top show was No Reservations coming in at 275 episodes running just over 7 years.

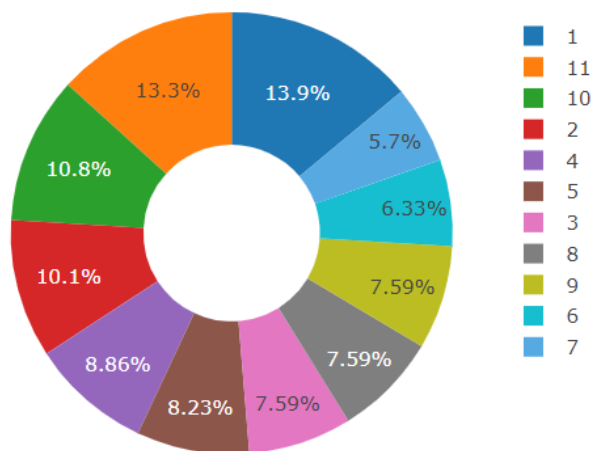
The Process:

1. We wrote some code to create a donut chart that broke Anthony Bourdain's shows down by season and counted each episode per season. And in javascript we were able to make it interactive allowing you to look at the breakdown of each show when selected.

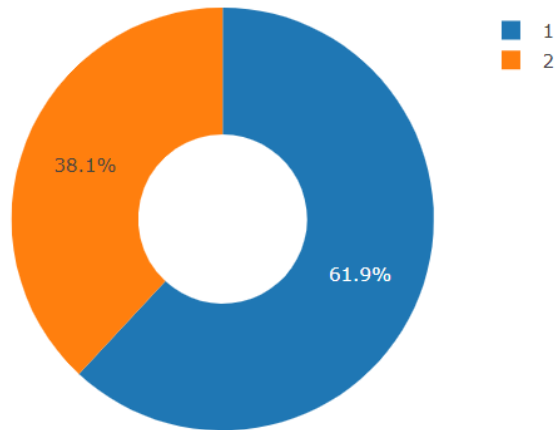
Anthony Bourdain Seasons for No Reservations



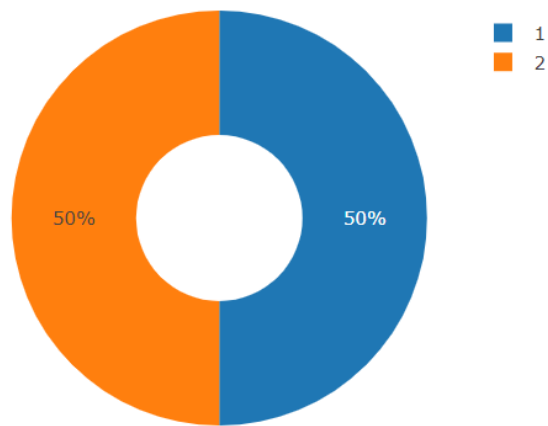
Anthony Bourdain Seasons for Parts Unknown



Anthony Bourdain Seasons for A Cook's Tour

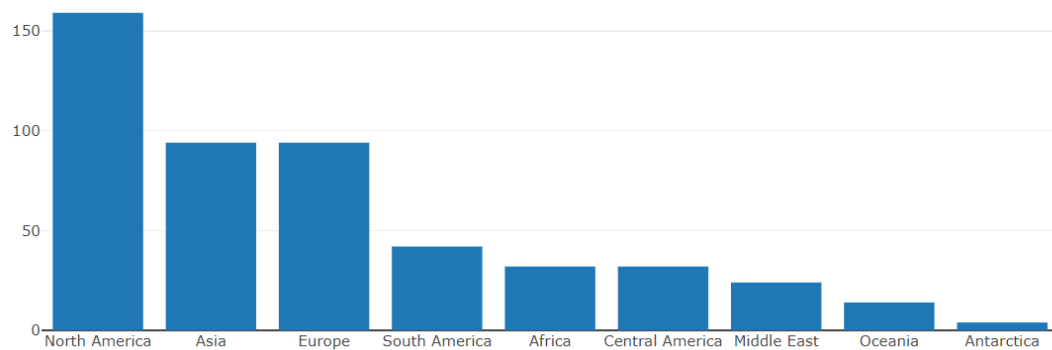


Anthony Bourdain Seasons for The Layover



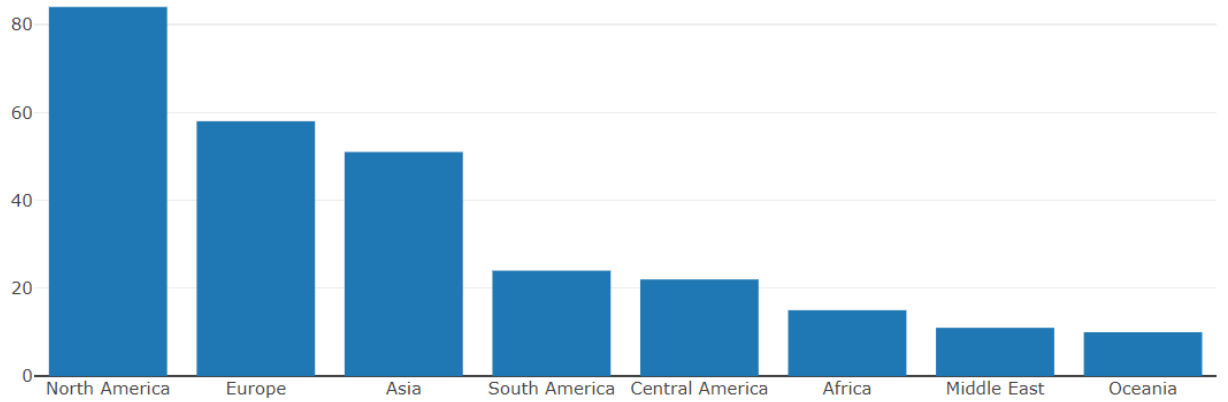
2. To get this answer we created a bar chart that ran through our data and calculated the number of times that Anthony Bourdain visited a Region over every show.

Anthony Bourdain Regions for All

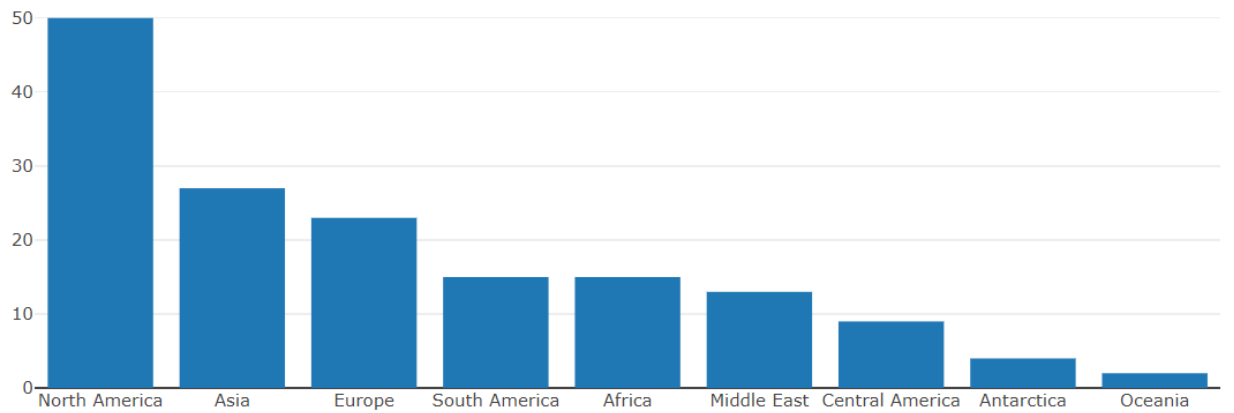


To take a closer look for trends we then broke it down by show:

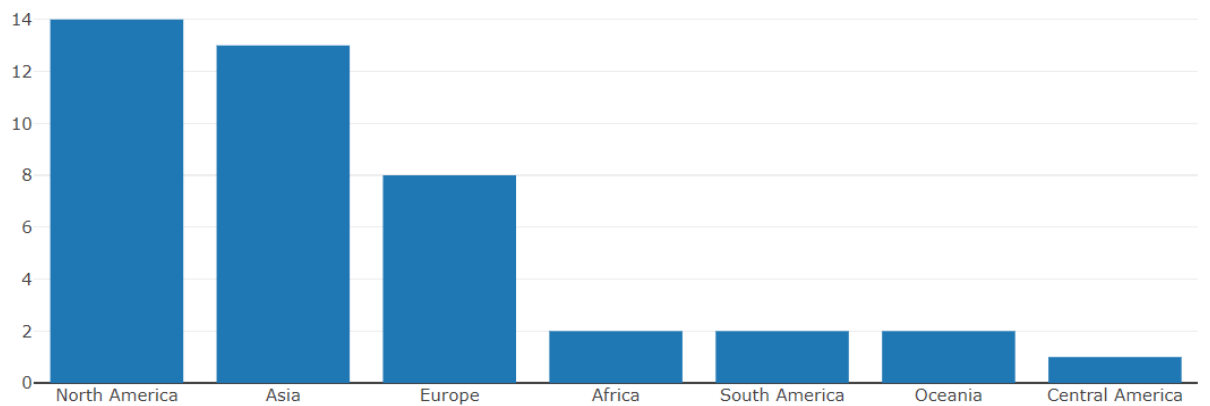
Anthony Bourdain Regions for No Reservations



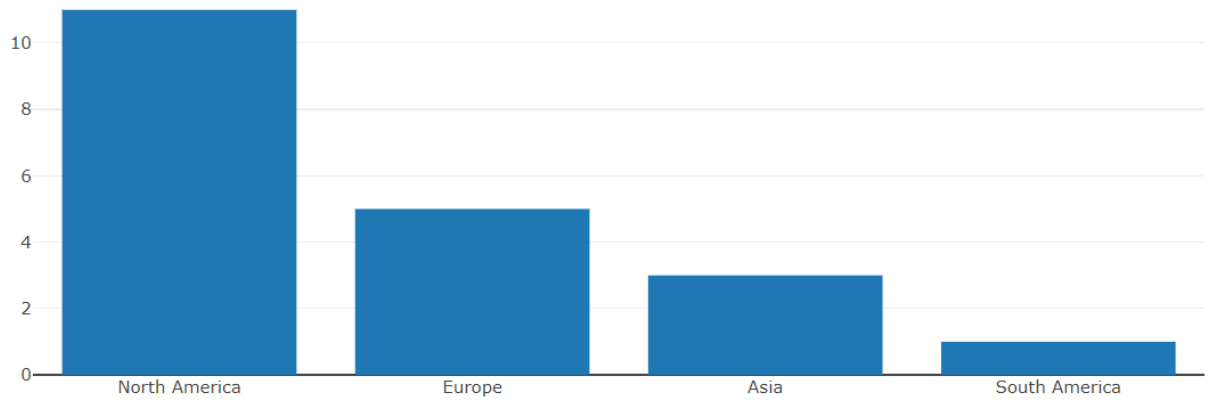
Anthony Bourdain Regions for Parts Unknown



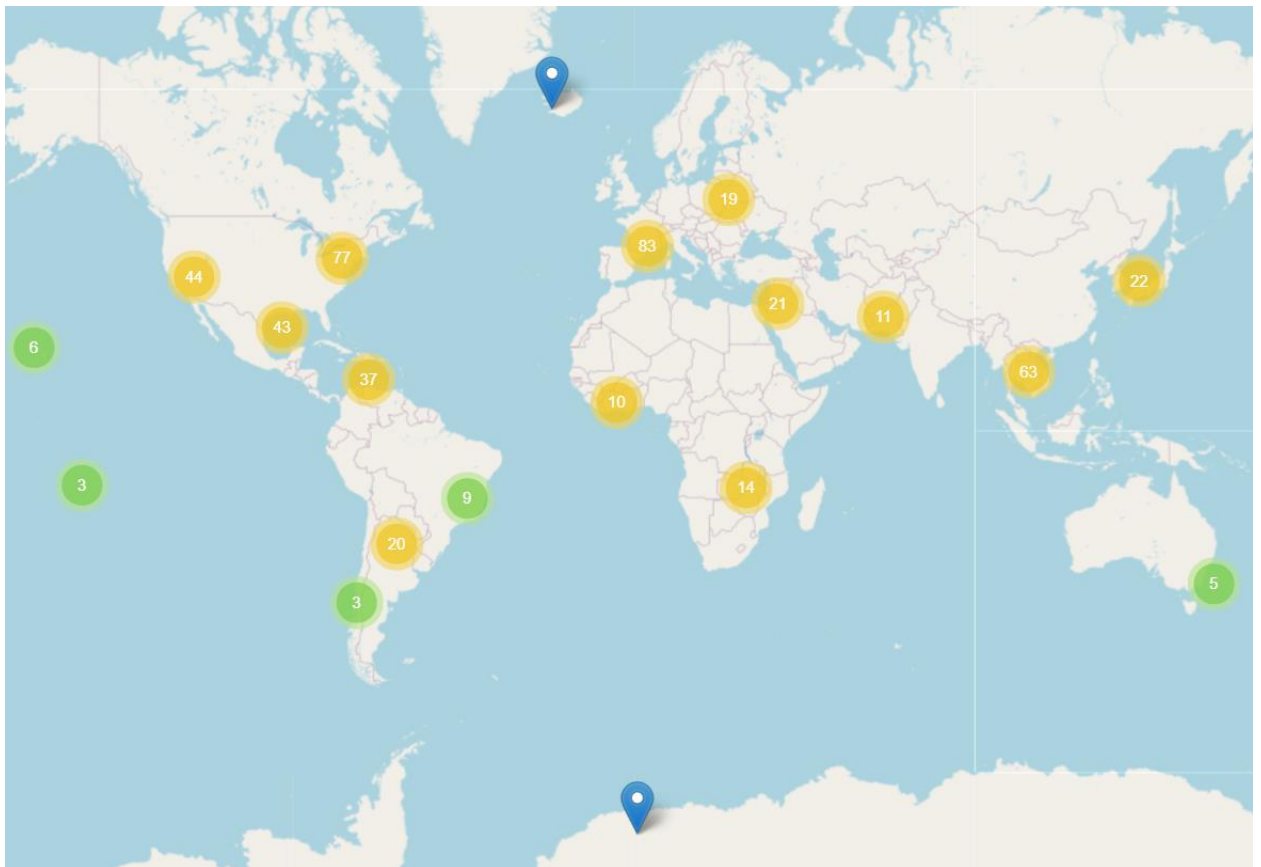
Anthony Bourdain Regions for A Cook's Tour



Anthony Bourdain Regions for The Layover



The trend of visiting North America held true through all his shows. We then made a map to show off the locations of his destinations.



3. When calculating distance traveled on a sphere, which the earth is, you must take into consideration the curvature of the sphere. If you do not take the Earth's curvature into consideration you would be simply calculating the Euclidean distance being the shortest path between two points, which would mean the number would be smaller. We calculated this distance travel by utilizing the Great Circle formula.

```
1 from math import radians, degrees, sin, cos, asin, acos, sqrt
2 def great_circle(lon1, lat1, lon2, lat2):
3     lon1, lat1, lon2, lat2 = map(radians, [lon1, lat1, lon2, lat2])
4     return 6371 * (
5         acos(sin(lat1) * sin(lat2) + cos(lat1) * cos(lat2) * cos(lon1 - lon2))
6     )
7
8     # Haversine formula
9     d_lat = lat2_rad - lat1_rad
10    d_lon = lon2_rad - lon1_rad
11
12    a = sin(d_lat / 2) ** 2 + cos(lat1_rad) * cos(lat2_rad) * sin(d_lon / 2) ** 2
13    c = 2 * atan2(sqrt(a), sqrt(1 - a))
14
15    # Radius of Earth in kilometers
16    radius = 6371
17
18    # Calculate the distance
19    distance = radius * c
20    return distance
21
22
23
24 # Lists to store Latitude and Longitude data
25 latitude_list = df['Latitude'].tolist()
26 longitude_list = df['Longitude'].tolist()
27
28 # Calculate distances using the sequential Latitude and Longitude data
29 total_distance = 0.0
30 for i in range(len(latitude_list) - 1):
31     lat1 = latitude_list[i]
32     lon1 = longitude_list[i]
33     lat2 = latitude_list[i + 1]
34     lon2 = longitude_list[i + 1]
35
36     distance = great_circle(lat1, lon1, lat2, lon2)
37     total_distance += distance
38
39 print(f"The total great-circle distance is {total_distance:.2f} kilometers.")
```

The total great-circle distance is 2772900.91 kilometers.

4. Running with the theory that the better a show performs the longer the show lasts, we calculated which show had the most episodes and ran for the longest time by utilizing air dates of each episode we concluded that No Reservations was Anthony Bourdain's top show.

'No Reservations' aired a total of 275 episodes over the course of 2,660 days, which is just over 7 years.

'Parts Unknown' aired 158 episodes over 1,897 days, or just over 5 years.

'A Cook's Tour' aired 42 episodes over 454, or just over 1 year.

'The Layover' aired only 20 episodes over 441 days, also just over 1 year.

Limitations:

We would have really liked to have been able to use food data. Unfortunately, our dataset did not include any specific dish references. The only place our team was able to find such information would have required a great deal of web scraping, which would have taken more time than we had to complete this project. Also, in terms of the travel distances, our calculations represent a cumulative path between unique locations; whereas, in reality, he could have traveled back to his home city of New York between some, or all, of his trips, amassing a great deal more overall miles traveled.

Future Work:

It would be interesting to acquire food data for all his various travels, and to be able to include that data in our mapping. We could also try to hunt down additional data about his actual travel paths to produce more accurate mileage calculations.