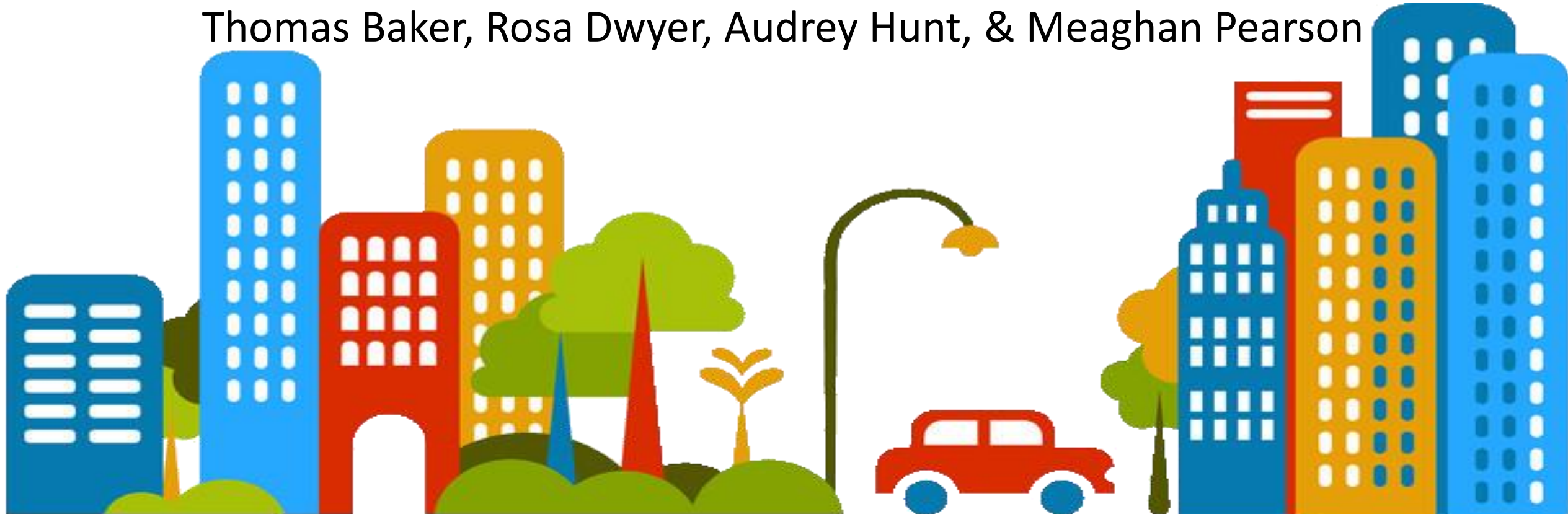


How Long Do Families and Nonfamilies Stay in Popular Vacation Spots Using Expedia Data?

The Nonparametrics

Thomas Baker, Rosa Dwyer, Audrey Hunt, & Meaghan Pearson



Goal

- To compare the average length of stay at the Top 5 Vacation Destinations for families vs. non-families within the United States based on what was offered by Expedia.



Process

1. We researched the top five vacation destinations within the United states (In no particular order)
 - New York, New York (58.5 million)
 - Orlando, Florida (66 million)
 - Waikiki, Hawaii (unavailable)
 - San Francisco, California (24.6 million)
 - Las Vegas, Nevada (42.3 million)
2. Merged the two data sets: *data* & *dest*
3. Split the data into who booked in the United States and who booked a destination in the United States

The Top Five Places to Take a Vacation in the US

TRAVEL TIPS

Emily Manthel



Vacationers to New York love to see the plays on old Broadway.

If you are not sure where to take your vacation, just follow the crowds. To learn the top travel destinations in the United States, Forbes Traveler surveyed major travel agencies across the country to see which cities sold the most flights and hotels. Popular online travel aggregators have similarly compiled their data to help travelers choose destinations. Some destinations are particular favorites with Americans and foreign visitors alike.

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New York, New York

Not surprisingly, the Big Apple is one of the top destinations in the U.S. With so much for visitors to do in the city, it's no wonder travelers agree that America's largest city is something to be seen. One of the most popular activities among tourists is seeing a Broadway show. Visits to Times Square, New York's Metropolitan Museum of Art, Ellis Island and the Empire State Building are just a few of the endless possibilities for tourists in New York.

Florida

Between the sandy beaches and year-round entertainment of Miami and family-friendly fun of Disney and Universal Studios in Orlando, Florida always makes the top of the charts for American tourism. Sunny, warm beach destinations comprise the majority of major travel agents' top U.S. vacation spots. These destinations in Florida tell that story again and again.

Hawaii

Waikiki tops tourists' lists as the favorite destination in Hawaii, but Honolulu and the Big Island see plenty of visitors each year, too. Besides the sun, sand, surf and snorkeling Hawaii is known for, the relaxing tropical culture, rugged climbing, volcano watching and world-class coffee also entice visitors to America's own South Pacific.

San Francisco, California

Despite its well-known lack of sun, San Francisco remains near the top of many travel agencies lists, too. A small city with plenty to do, vacationers find it an urban paradise. The Golden Gate Bridge is the iconic landmark, while crooked, hilly streets and signature cable cars make just traveling through the city a vacation-worthy endeavor.

Las Vegas, Nevada

Finally, Las Vegas takes the last slot for popular vacation spot. Although you might think the only thing to do is gamble, the resort atmosphere in Vegas rivals seaside resorts across North America. Enjoy luxurious living at one of the Strip's decadent hotels, bring your appetite for a signature Vegas-style buffet and see one of dozens of nightly live performances.

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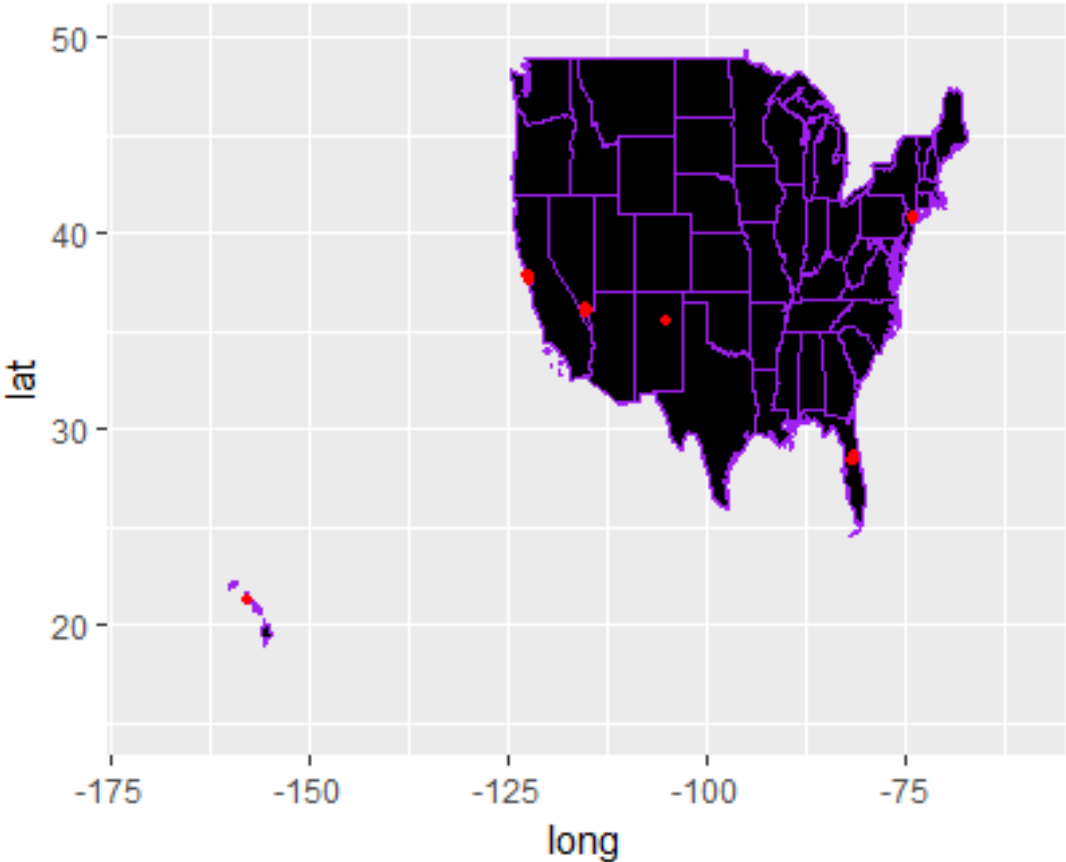
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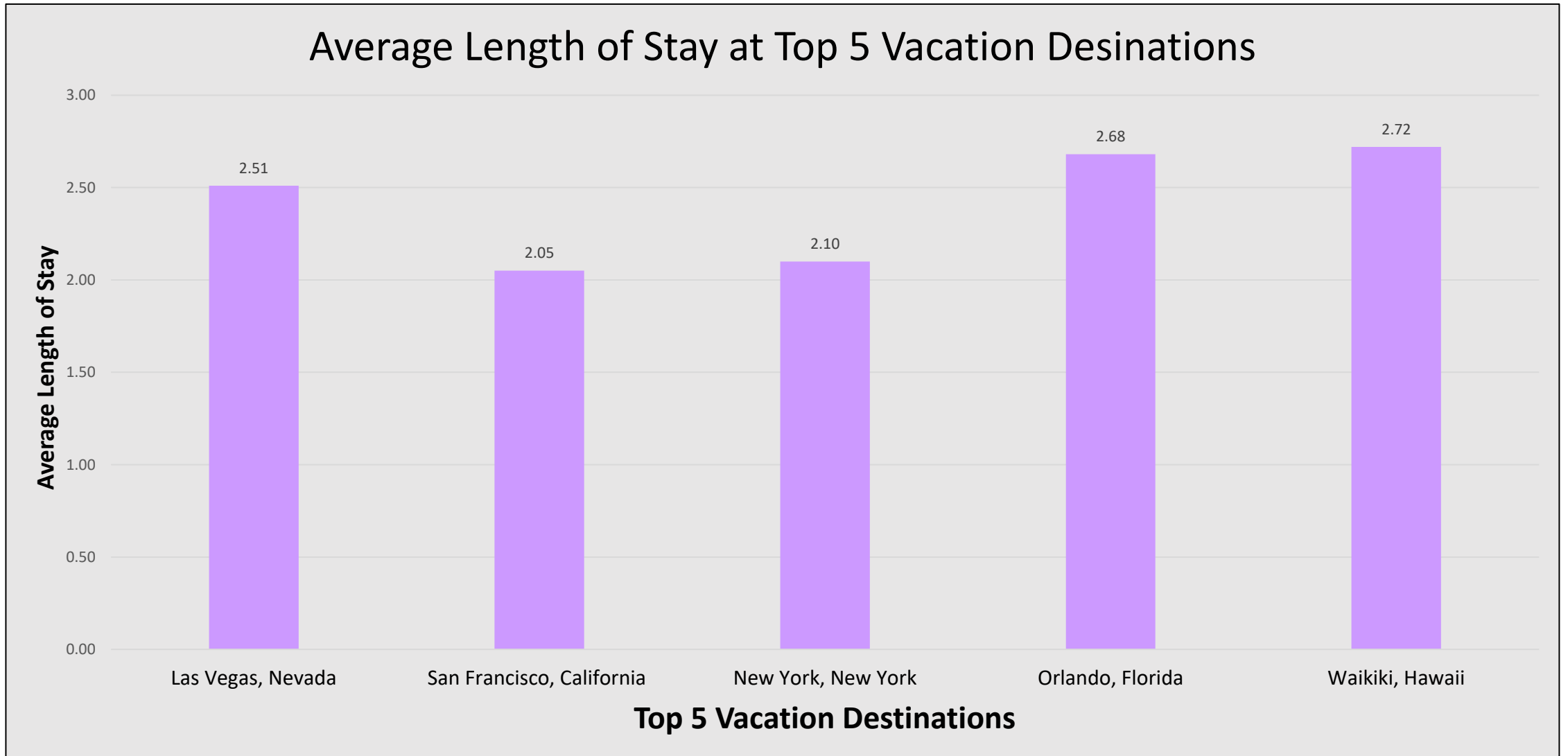
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4. We created a bar graph of how many times people booked within those cities.



5. We found the average length of stay at each destination for people who booked with Expedia. To find the length of stay variable, we used information from the check in and check out dates.

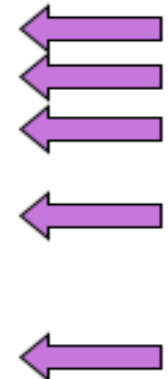


ANOVA and Tukey Comparison Between Destinations and Length of Stay

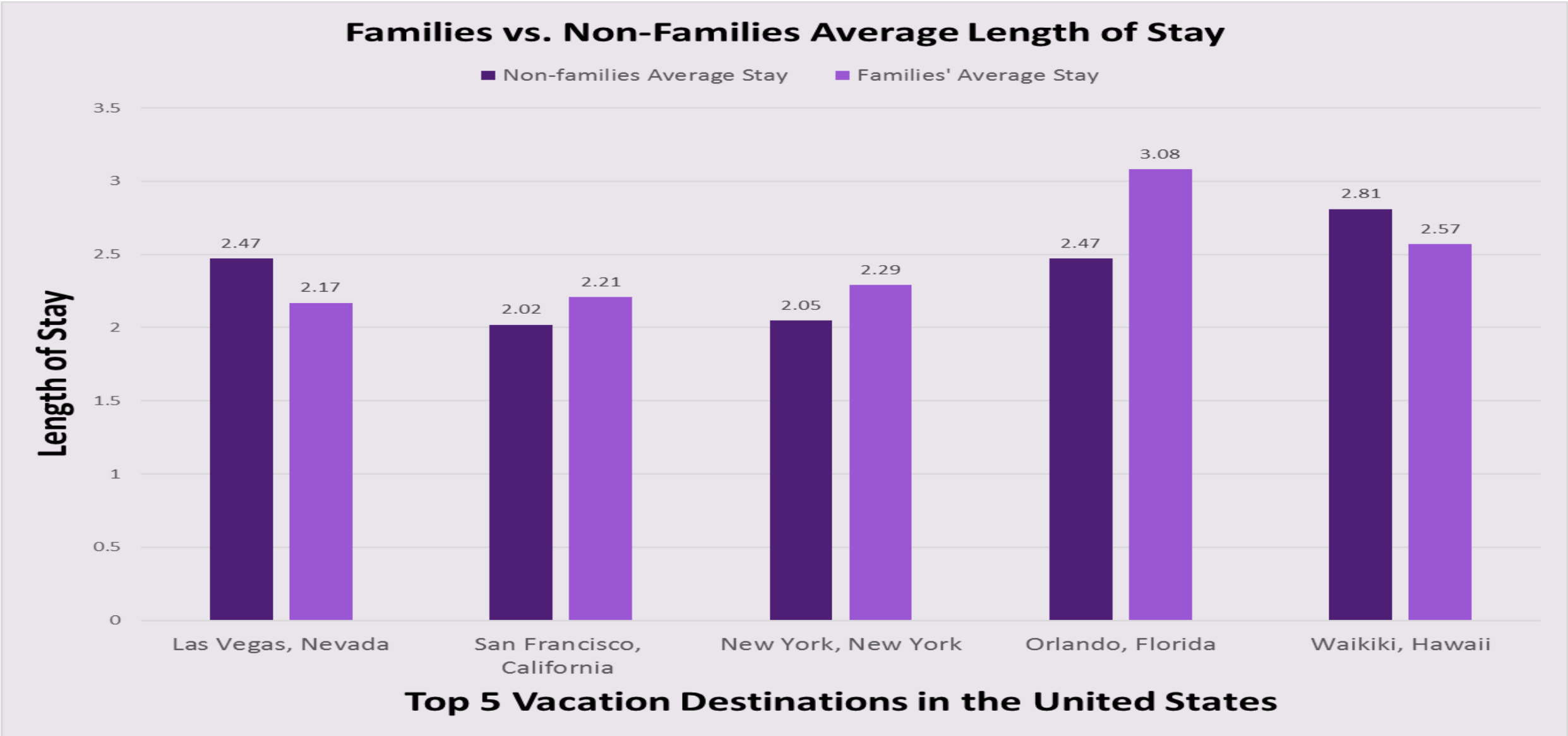
```
              Df Sum Sq Mean Sq F value    Pr(>F)
newdata1$new_destination      4      149    37.32    16.08 4.87e-13 ***
Residuals                   3038      7049     2.32
```

```
$`newdata1$new_destination`
```

	diff	lwr	upr	p adj
New York, New York-Las Vegas, Nevada	-0.35439650	-0.64657374	-0.06221925	0.0083603
Orlando, Florida-Las Vegas, Nevada	0.24152719	0.04012443	0.44292995	0.0094904
San Francisco, California-Las Vegas, Nevada	-0.39221630	-0.58904824	-0.19538436	0.0000006
Waikiki, Hawaii-Las Vegas, Nevada	0.28161883	-0.70384076	1.26707842	0.9364457
Orlando, Florida-New York, New York	0.59592369	0.27311972	0.91872765	0.0000049
San Francisco, California-New York, New York	-0.03781980	-0.35779189	0.28215229	0.9976604
Waikiki, Hawaii-New York, New York	0.63601533	-0.38122109	1.65325174	0.4299871
San Francisco, California-Orlando, Florida	-0.63374349	-0.87369696	-0.39379002	0.0000000
Waikiki, Hawaii-Orlando, Florida	0.04009164	-0.95487844	1.03506172	0.9999670
Waikiki, Hawaii-San Francisco, California	0.67383513	-0.32021980	1.66789005	0.3448951



6. We found the average length of stay at each destination for people who booked as a family and not as a family.



ANOVA and Tukey Comparison Between Families and Their Length of Stay

```
              Df Sum Sq Mean Sq F value Pr(>F)
newdata1.family$new_destination  4    91.1   22.782    8.471 1.3e-06 ***
Residuals                    482  1296.3    2.689
---
```

```
$`newdata1.family$new_destination`
```

	diff	lwr	upr	p adj
New York, New York-Las Vegas, Nevada	0.11510530	-0.7319616	0.9621722	0.9959133
Orlando, Florida-Las Vegas, Nevada	0.90641479	0.4312369	1.3815927	0.0000026
San Francisco, California-Las Vegas, Nevada	0.03275236	-0.5686542	0.6341589	0.9998887
Waikiki, Hawaii-Las Vegas, Nevada	0.39241623	-1.3410823	2.1259147	0.9718984
Orlando, Florida-New York, New York	0.79130949	-0.0419852	1.6246042	0.0718945
San Francisco, California-New York, New York	-0.08235294	-0.9935477	0.8288418	0.9991709
Waikiki, Hawaii-New York, New York	0.27731092	-1.5864496	2.1410714	0.9942003
San Francisco, California-Orlando, Florida	-0.87366243	-1.4555108	-0.2918141	0.0004429
Waikiki, Hawaii-Orlando, Florida	-0.51399856	-2.2408091	1.2128120	0.9259795
Waikiki, Hawaii-San Francisco, California	0.35966387	-1.4060571	2.1253849	0.9809505



Note: We highlighted the locations that were significantly different for families: Orlando was significantly greater than both Las Vegas & San Francisco.

ANOVA and Tukey Comparison Between Non-Families and Length of Stay

```

              Df Sum Sq Mean Sq F value Pr(>F)
newdata1.nonfamily$new_destination  4      104    25.989    11.66 2.2e-09 ***
Residuals                2551      5686     2.229

```

```
$`newdata1.nonfamily$new_destination`
```

	diff	lwr	upr	p adj
New York, New York-Las Vegas, Nevada	-0.419753872	-0.72880079	-0.1107070	0.0019934
Orlando, Florida-Las Vegas, Nevada	0.002325934	-0.23217412	0.2368260	0.9999999
San Francisco, California-Las Vegas, Nevada	-0.447829016	-0.65439418	-0.2412639	0.0000000
Waikiki, Hawaii-Las Vegas, Nevada	0.347922896	-0.88560262	1.5814484	0.9392362
Orlando, Florida-New York, New York	0.422079806	0.06535326	0.7788064	0.0109887
San Francisco, California-New York, New York	-0.028075144	-0.36709243	0.3109421	0.9994218
Waikiki, Hawaii-New York, New York	0.767676768	-0.49480046	2.0301540	0.4592156
San Francisco, California-Orlando, Florida	-0.450154950	-0.72294241	-0.1773675	0.0000681
Waikiki, Hawaii-Orlando, Florida	0.345596962	-0.90072925	1.5919232	0.9427317
Waikiki, Hawaii-San Francisco, California	0.795751912	-0.44562149	2.0371253	0.4035420



Note: San Francisco & Las Vegas, Orlando & New York, and San Francisco & Orlando are significantly different for non-families.

Any Questions?