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Finding Fast Food Opportunities

What to Open and Where to Open It

Finding the Best Cities for the Best Franchises

We are interested in opening some of our favorite fast food franchises across the USA. Our goal is to make a data-driven decision on what restaurants to open and in what parts of the country.



Answering Questions with Data

- Question: What counties are ideal candidates?
- Method: Gather Census data via API to determine which counties are seeing the fastest population and income growth.
- Question: Which franchises are trending positively with customers?
- Method: Aggregate Yelp rating data and measure Google search trends.
- Question: How do we put the right restaurants in the right areas?
- Method: Check Google search trends by region to see where the demand is.



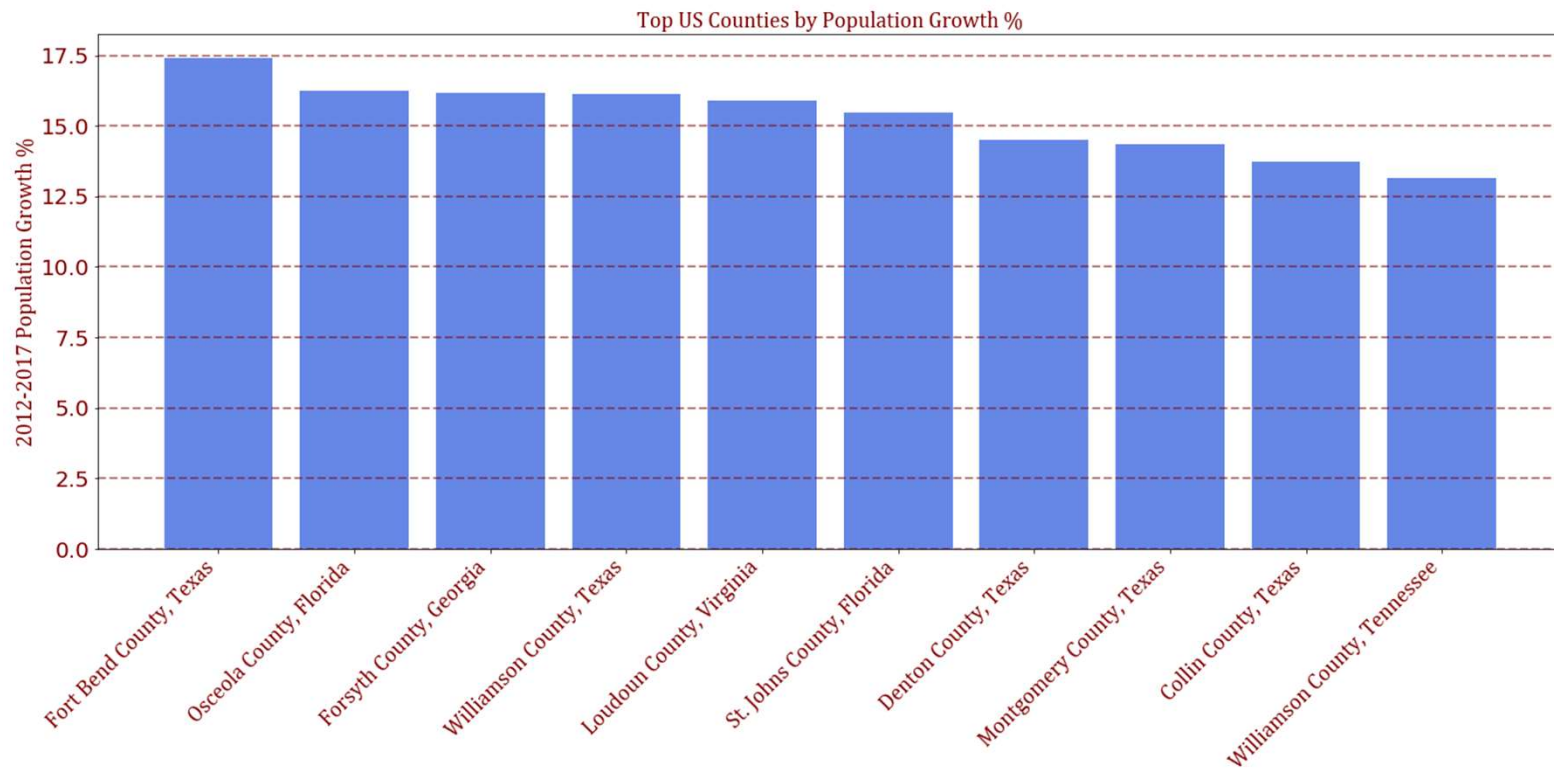
What Counties Are Ideal Candidates?

- We made API calls to api.census.gov to gather county population and income data.
- 5-year growth rates calculated (2012-2017 data sets).
- For lower cost restaurants (McDonalds, Taco Bell), we focused on cities with high population growth.
- For more “up-scale” restaurants (Paneras, Texas Roadhouse) we focused on cities with both high population and income growth.

Sugar Land, Fort Bend County, TX



USA's Fastest Growing Counties by Population



Fastest Growing Counties: Household Income + Population Growth

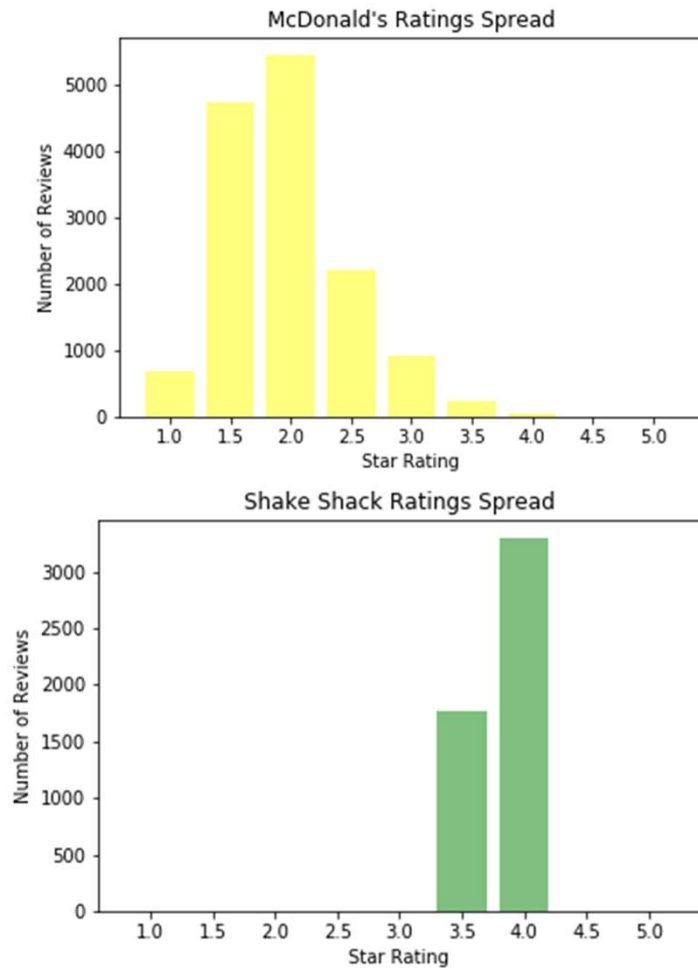


Which Franchises Are Trending Positively?

- We used Yelp data from Kaggle to gather review ratings for our 8 franchises.
- Average ratings and standard deviation calculated from this data subset of 11 metropolitan areas.
- Google search data downloaded via csv's to determine which restaurants are seeing increased interest over the last 2 years.
- Observations from both datasets combined to select the most popular restaurants.



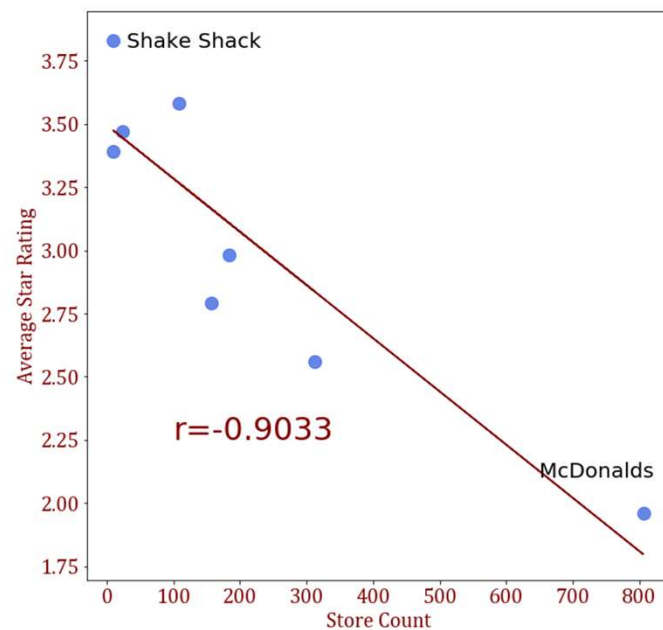
Not So Golden Arches and Lovin' the Shack



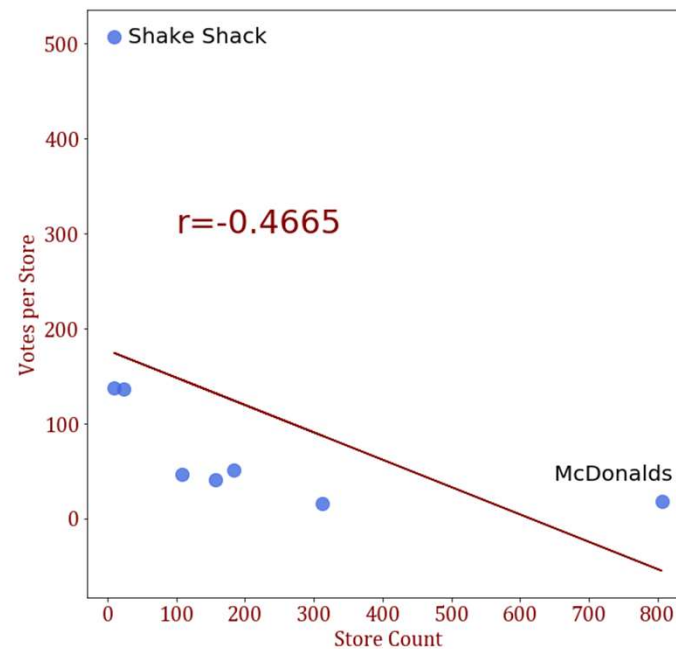
Franchise	Average Rating	Store Count
Shake Shack	3.83	10
Five Guys	3.58	109
Halal Guys	3.39	10
Texas Roadhouse	3.47	24
Chipotle	2.98	183
Panera's	2.79	157
Taco Bell	2.56	313
McDonalds	1.96	806

Bigger Isn't Better

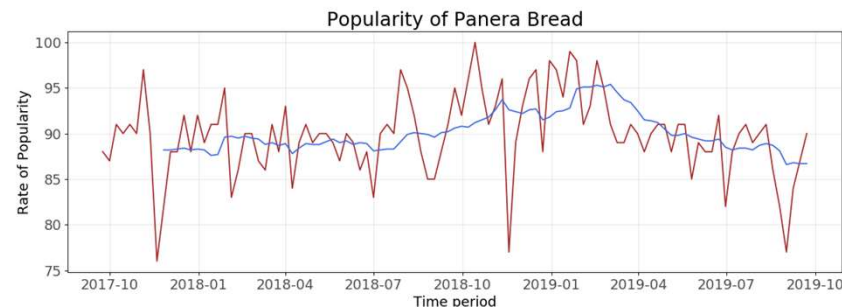
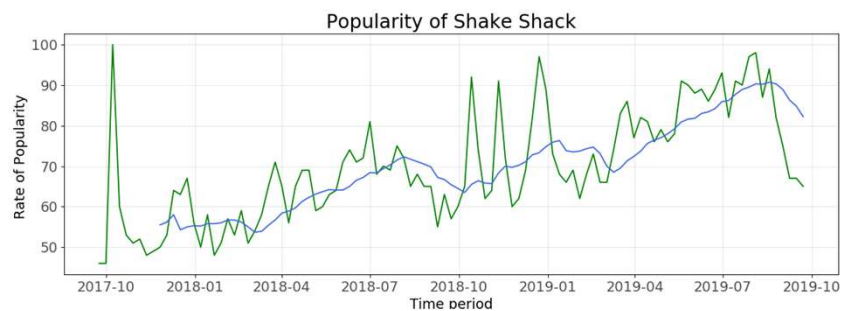
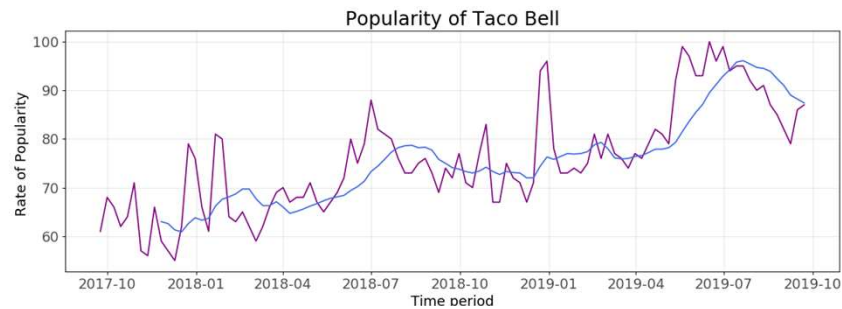
The Larger the Chain the Lower the Rating



Higher voting "turnout" for the smaller chains



Google Search Popularity: Leaders and Laggards



Google Search Popularity. Blue lines represent 10 week moving average

Franchise	2y Change in Search*
Shake Shack	48.1%
Taco Bell	38.7%
Texas Roadhouse	21.4%
Chipotle	16.4%
Five Guys	14.1%
Halal Guys	13.9%
McDonalds	13.1%
Panera Bread	-1.7%

*2y change Google Search Trend based on 10 week moving average



And the Winners Are....



Shake Shack

- Highest Star Rating Average and Best Search Trend
- Low Store Count



Texas Roadhouse

- High Star Rating Average and Strong Google Search Trend
- Upscale Restaurant for High Income Growth Areas



Halal Guys

- Third Best Star Rating Average and Low Store Count
- Unique Menu Offering Compared to Others on Our List



Taco Bell

- Second Best Google Search Trend
- Low Cost Restaurant for High Population Growth Areas

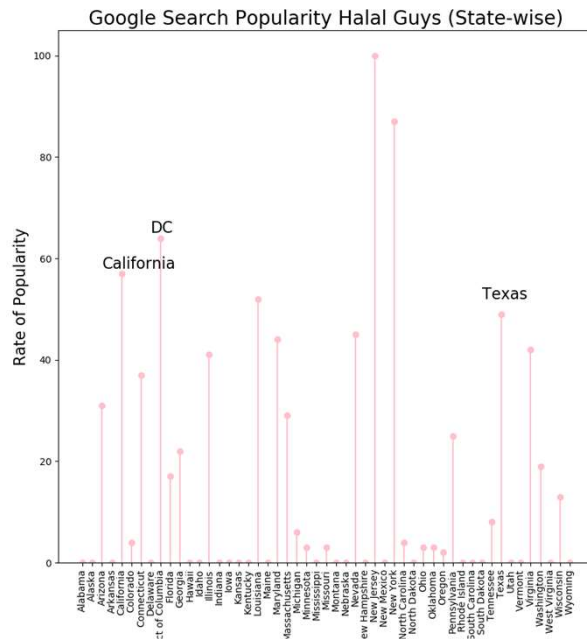
Where to Place Our Winners...

- Counties in Texas, Florida, Georgia, Virginia and Tennessee had the fastest population growth form 2012-2017
- Counties in California, Colorado, Texas, DC, Florida and Tennessee had the fastest combined population and income growth.
- Regional search trends from Google can tell us if our franchises are relatively popular in these states.

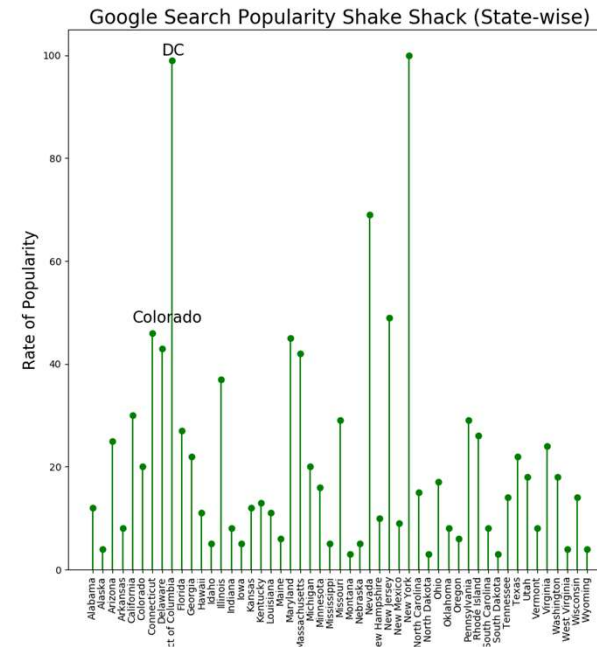


State Popularity: Halal Guys and Shake Shack

DC, California and Texas stand out for Halal Guys

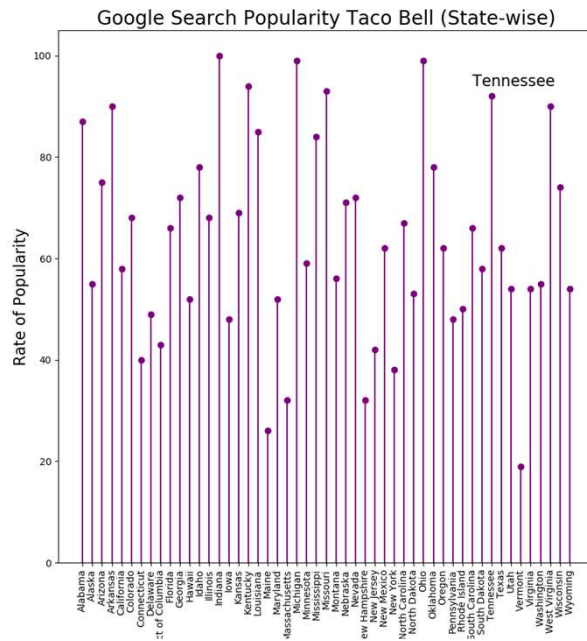


DC Loves Shake Shack

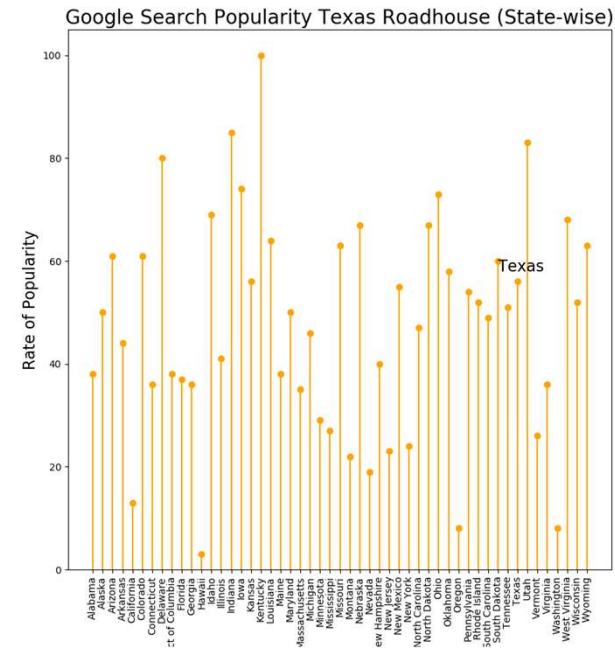


State Popularity: Taco Bell

Taco Bell does well in Tennessee

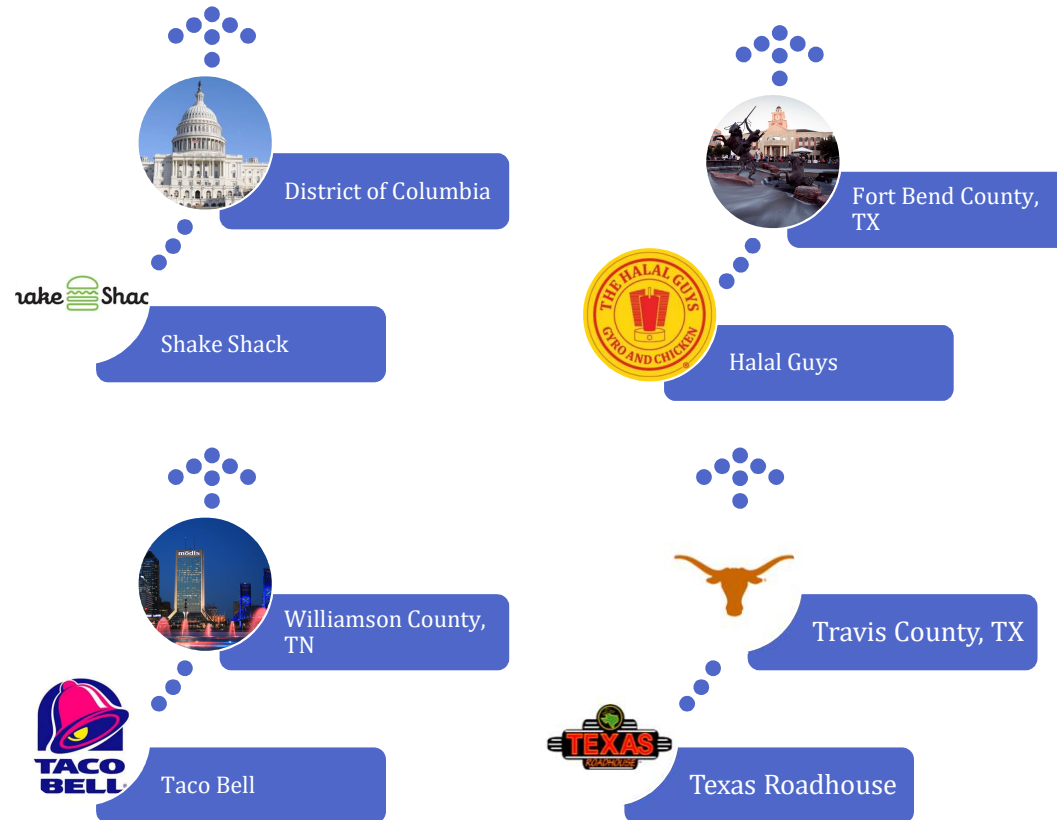


Texas Roadhouse not strong in our target states but TX is closest





The Happy Couples



Next Steps

- Determine concentration of our franchise in target counties. Are there a lot of Taco Bells already in Jacksonville?
- What other competition are we up against in these counties? Will people in Austin go to BBQ instead of Texas Roadhouse?
- Check if county demographics line up with current customers of our franchises



Appendix



Dataset Sources

Census Data: <https://api.census.gov>

Yelp Ratings Data: <https://www.kaggle.com/yelp-dataset/yelp-dataset>

Google Trend Data:
https://trends.google.com/trends/explore?q=%2Fm%2F02vx4,%2Fm%2F0jm_&date=all&geo=US

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All data complied, cleaned and graphed with Python