Miami Gastronomic Offering - Initial Business Analysis

Applied Data Science Capstone by IBM/Coursera

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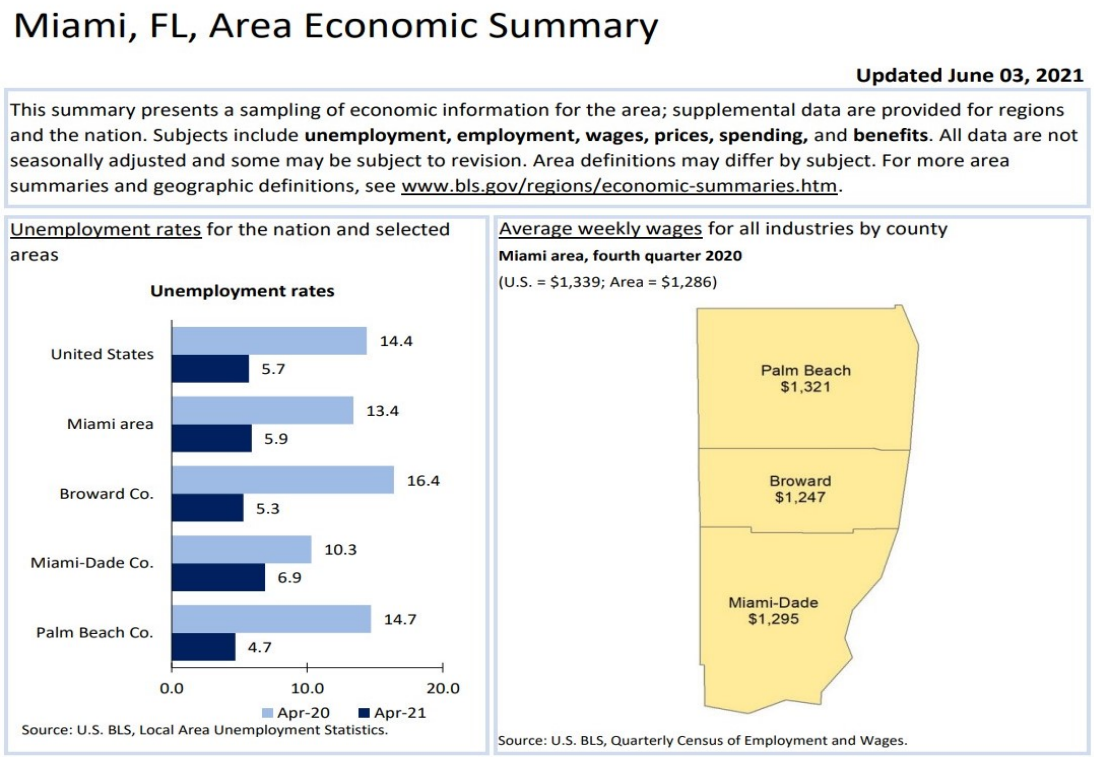
Introduction: Business Problem

The Mestiza Inc. group's Stakeholders are interested on a new restaurant development for its Latin American fusion proposals. Given last decade growth in the Miami Area especially in the gastronomic scene, stakeholders will like to conduct a full analysis divided on phases for the proposal consolidation to the partners. This Analysis will be conducted to determine the most optimal conditions such as location, nearby competitors and gastronomical proposal in the area.

Miami Location also seems to be benefited by the global and national environment a favorable trend of top companies opening new offices in the state of Florida together with the rise in remote working is giving workers more freedom to choose where they want to live, this has lured a significant amount of people from traditionally larger cities such as New York, Los Angeles, San Francisco, Boston to live in Florida creating changing the ecosystems in many economic spaces.

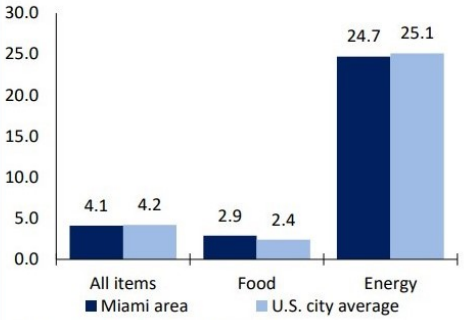
“Florida's population grew by 2.7 million — or 14.6% — between 2010 and 2020, according to US Census data. This is double the rate of overall US population growth.” - Business Insider
"It's not just retirees – it's tech workers leaving San Francisco," John Boyd, the CEO of The Boyd Company In particular, Florida is becoming a hotspot for banking and financial services, while Miami is as emerging as "one of the hottest new tech hubs in North America today,"



Hedge fund Elliott Management is moving its headquarters to West Palm Beach, private-equity firm Blackstone plans to open an office in Miami, and Goldman Sachs is considering the state for its asset management division. Even Subway is shifting some business units to Miami.

Over-the-year change in the prices paid by urban consumers for selected categories

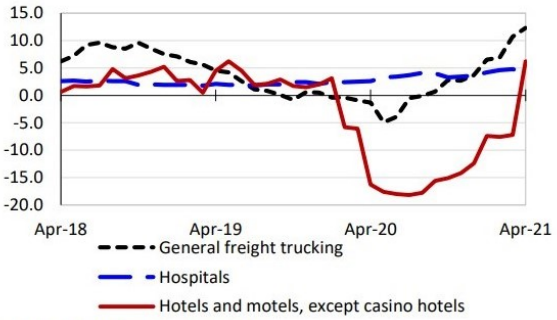
12-month percent change in CPI-U, April 2021



Source: U.S. BLS, Consumer Price Index.

Over-the-year changes in the selling prices received by producers for selected industries nationwide

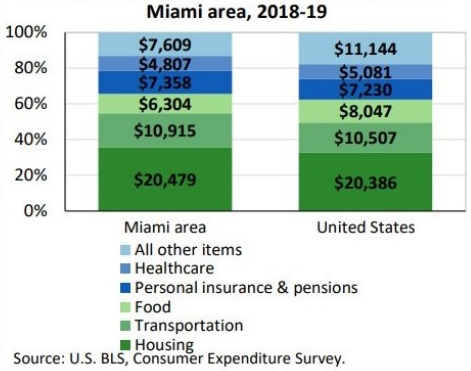
12-month percent changes in PPI



Source: U.S. BLS, Producer Price Index.

Average annual spending and percent distribution for selected categories

Average annual expenditures, United States and Miami area, 2018-19



Source: U.S. BLS, Consumer Expenditure Survey.

Average hourly wages for selected occupations

Occupation	Miami area	United States
All occupations	$25.47	$27.07
Accountants and auditors	38.52	39.26
Registered nurses	34.76	38.47
Aircraft cargo handling supervisors	33.07	28.66
Construction laborers	16.41	20.67
Receptionists and information clerks	14.98	15.58
Maids and housekeeping cleaners	11.96	13.47

Source: U.S. BLS, Occupational Employment and Wage Statistics, May 2020.

Employer costs per hour worked for wages and selected employee benefits by geographic division

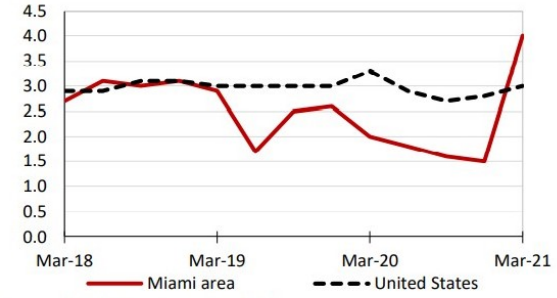
Private industry, December 2020	South Atlantic (1)	United States
Total compensation	$34.00	$36.23
Wages and salaries	24.53	25.48
Total benefits	9.47	10.74
Paid leave	2.54	2.69
Vacation	1.32	1.38
Supplemental pay	1.05	1.25
Insurance	2.28	2.81
Retirement and savings	1.07	1.25
Legally required benefits	2.53	2.75

(1) The states that compose the South Atlantic census division are: DE, DC, FL, GA, MD, NC, SC, VA, and WV.

Source: U.S. BLS, Employer Costs for Employee Compensation.

Over-the-year changes in wages and salaries

12-month percent changes in ECI



Source: U.S. BLS, Employment Cost Index.

Source:

US Bureau of Labor Statistics Miami Area Economic Summary
Additional References:
Average Weekly Wages
Annual Spending
Employer Cost

In the gastronomic scene, over the decades, Miami has become a melting pot of Latin and Caribbean culture including Central and South America. this mix of cultures, is especially popular in Miami and you can indulge in fresh, citrusy ceviche at casual corners and upscale restaurants all over Miami. At Miami's glamorous hotel restaurants, guests can take the elevator down to dine in a restaurant with a lavish design and buzzy ambiance that's just as much a part of the experience as the menu. Miami has become one of the hottest gastronomic hubs in North America, given the diversity of its residents that attracts the world with its many amenities such a beautiful coast line, yearlong summer weather and relative closeness to amusement parks and natural adventures. all of these as a complementary part to the state laws and policies supporting investment, and business to move combined with a favorable law to workers with no Income Tax making it attractive as a home base.

The main objective of this report is to show the diversity of the Miami scene and the hottest points to determine the best possible location for a new restaurant, and set the starting point for the proposal and any additional analysis required to complete a full business assessment.

Data description

The follow section contain the initial data sets to be used during this project to provide descriptive analysis on different variables for the Miami-Dade Area as a possible location for the development of a new Restaurant by Mestiza Inc. Group, each section gives an example of each dataframe and its variables. Also the sources and the process of Data Cleaning and Wrangling is represented for ilustrative purposes.

Data Sections

To guide this analysis the information will be leveraged from different sources to provide a broad view over the Miami Dade County, Geographical data, Demographics, Average Expenditure, Location and Venue data

- Geographical Data - this data will provide insight the different neighborhoods and communities in the Miami Dade area and serve for graphic maps demonstration further in this report.
- Demographics – intended to analyze the case of Miami-Dade County as a location for the Gastronomic offer the group is planning to invest, allowing the stakeholders to initially lock on their consumers target and possible customers.
- Location and Venue Data -Foursquare venue information and location will provide a view of the different neighborhood venues and will support our analysis on possible locations for further analysis.

Miami Neighborhoods & Communities

The data used in this section has been extracted from Wikipedia based on latest Census Data. For this assessment we will approach Miami-Dade area reviewing Neighborhood distribution and Community distribution the later more popular among locals and also valid for the study as will represent Towns and Cities with their coordinates

	Neighborhood	Demonym	Population2010	Population/Km²	Sub-neighborhoods	Coordinates
0	Allapattah	NaN	54289	4401	NaN	.mw-parser-output .geo-default,.mw-parser-outp...
1	Arts & Entertainment District	NaN	11033	7948	NaN	25°47′56″N 80°11′24″W / 25.799°N 80.190°W
2	Brickell	Brickellite	31759	14541	West Brickell	25°45′29″N 80°11′35″W / 25.758°N 80.193°W
3	Buena Vista	NaN	9058	3540	Buena Vista East Historic District and Design ...	25°48′47″N 80°11′31″W / 25.813°N 80.192°W
4	Coconut Grove	Grovite	20076	3091	Center Grove, Northeast Coconut Grove, Southwe...	25°42′43″N 80°15′25″W / 25.712°N 80.257°W

Neighborhood Dataset preparation

Initial data downloaded required reformatting and completion of missing values, completed with pandas data frame. This data was scrapped from Wikipedia, formatted and cleaned up to fit the need of neighborhood centers as investigation frame

	Neighborhood	Sub-neighborhoods	Latitude	Longitude
0	Allapattah	Allapattah	25.815	-80.224
1	Arts & Entertainment District	Arts & Entertainment District	25.799	-80.190
2	Brickell	West Brickell	25.758	-80.193
3	Buena Vista	Buena Vista East Historic District and Design ...	25.813	-80.192
4	Coconut Grove	Center Grove, Northeast Coconut Grove, Southwe...	25.712	-80.257
5	Coral Way	Coral Gate, Golden Pines, Shenandoah, Historic...	25.750	-80.283
6	Design District	Design District	25.813	-80.193
7	Downtown	Brickell, Central Business District (CBD), Dow...	25.774	-80.193
8	Edgewater	Edgewater	25.802	-80.190
9	Flagami	Alameda, Grapeland Heights, and Fairlawn	25.762	-80.316
10	Grapeland Heights	Grapeland Heights	25.792	-80.258
11	Liberty City	Liberty City	25.832	-80.225
12	Little Haiti	Lemon City (aka Little River)	25.824	-80.191
13	Little Havana	Riverside and South River Drive Historic District	25.773	-80.215
14	Lummus Park	Lummus Park	25.777	-80.201
15	Midtown	Edgewater and Wynwood	25.807	-80.193
16	Overtown	Spring Garden	25.787	-80.201
17	Park West	Park West	25.785	-80.193
18	The Roads	The Roads	25.756	-80.207
19	Upper Eastside	Bay Point Estates, Bayside District, Belle Mea...	25.830	-80.183
20	Venetian Islands	Biscayne Island and San Marco Island	25.791	-80.161
21	Virginia Key	Virginia Key	25.736	-80.155
22	West Flagler	West Flagler	25.775	-80.243
23	Wynwood	Wynwood Art District and Wynwood Fashion District	25.804	-80.199

Additional Communities Data Set

Data processed using GeoCoder based on Communities in Miami-Dade County including main Cities for illustration and contrast with neighborhood division that resulted in the final Geographical division used

In [13]:
```
### Use Geocoder API to gather Coordinates for Each Community in Miami-Dade Table
latitude=[]
longitude=[]
for code in miami['Community']:
    g = geocoder.arcgis('{}, Miami, Florida'.format(code))
    print(code, g.latlng)
    while (g.latlng is None):
        g = geocoder.arcgis('{}, Miami, Florida'.format(code))
        print(code, g.latlng)
    latlng = g.latlng
    latitude.append(latlng[0])
    longitude.append(latlng[1])
```

```
Aventura [25.95700997431863, -80.14699993661931]
Bal Harbour [25.89685799195145, -80.12438328611387]
Bay Harbor Islands [25.891075043888335, -80.13189989613923]
Biscayne Park [25.881260000000054, -80.17998999999998]
Coral Gables [25.728414454021163, -80.25151966880864]
Cutler Bay [25.589333000000067, -80.36198399999995]
Doral [25.80999962343031, -80.33730333172564]
El Portal [25.85450000000003, -80.20560999999998]
Florida City [25.447870000000023, -80.48089999999996]
Golden Beach [25.966060000000027, -80.11957999999998]
Hialeah [25.826207000000068, -80.25694199999998]
Hialeah Gardens [25.811815669473667, -80.3863559555608]
Homestead [25.600514895540858, -80.3548120353892]
Indian Creek [25.87357505585902, -80.14016414753287]
Key Biscayne [25.679220000000043, -80.15769999999998]
Medley [25.782640038888275, -80.38599431587694]
Miami [25.77481000000006, -80.19772999999998]
Miami Beach [25.830790000000036, -80.12172999999996]
Miami Gardens [25.941570540380578, -80.1846853186584]
Miami Lakes [25.91297000000003, -80.30932999999999]
Miami Shores [25.781334000000072, -80.25811799999997]
Miami Springs [25.836194943593338, -80.30398993589772]
North Bay Village [25.848786000000075, -80.15909399999998]
North Miami [25.923536769297524, -80.20012190943456]
North Miami Beach [25.92805738903972, -80.20222939953061]
Opa-locka [25.899760036682594, -80.210596775415]
Palmetto Bay [25.770030908914304, -80.32035085181207]
Pinecrest [25.643919765316255, -80.33399218156164]
South Miami [25.75202477121354, -80.20584965751172]
Sunny Isles Beach [25.92597801040188, -80.1473797487075]
Surfside [25.877814230514023, -80.1271187792798]
Sweetwater [25.767645523968607, -80.31805072376699]
Virginia Gardens [25.73326653909154, -80.24166167857628]
West Miami [25.768740000000037, -80.18951999999996]
```

	Community	Latitude	Longitude
0	Aventura	25.957010	-80.147000
1	Bal Harbour	25.896858	-80.124383
2	Bay Harbor Islands	25.891075	-80.131900
3	Biscayne Park	25.881260	-80.179990
4	Coral Gables	25.728414	-80.251520

Demographic Data

Source: Survey/Program: American Community Survey

TableID: S0201 Product: 2019: ACS 1-Year Estimates Selected Population Profiles

return to data menu
Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The information presented on the tables below have been extracted from the original reports and been formatted for the subject of interest focused only on the Miami-Dade Area.

Latino Population Demography

return to data menu

Label	Hispanic Any Race	Puerto Rican	Cuban	Other Hispanic	Dominican	Central American	Honduran	Nicaraguan	Other South American	Colombian	Venezuelan
Total population	1886364	98436	986926	113991	70052	75620	71787	116948	107875	139104	105625
18 to 34 years	402966	23195	183044	30815	16862	20388	19405	24880	22236	33429	28712
35 to 64 years	804772	40299	420769	42547	28236	27352	27290	57517	51425	63911	45426
65 years and over	318020	12146	220760	8087	11107	7584	5191	10534	17072	19310	6229

Table Extracted from General Census Table S0201 Product: 2019: ACS 1-Year Estimates Selected Population Profiles. Taking the full estimate and disregarding for our purpose the 10% variability on the available Census estimations.

All Data has been pre-Processed to remove additional fields, Column names and other changes to make the data suitable and exportable to a CSV File. 'Total population' Numbers reflect full extent of Latino population, for this report we have exclude population details belonging to Age Range under 18 years old as won't represent a target for the Restaurant project.

Other Hispanic Field, Central American and Other South American fields have been modified to exclude countries already represented. Total Population difference with sum of individual Values account for population under 18 years Old and Mexican Population not segregate on the Original data.

Miami Income Data

return to data menu
Table Extracted from General Census Table S0201 Product: 2019: ACS 1-Year Estimates Selected Population Profiles. Considering full Miami-Dade population and disregarding race breakdown to ease the analysis and graphical representation, estimation considered disregarding the 10% variability on the available Census estimations.

	Income Range USD	Household income	Family Income	Married no Kids	Singles or non Family household
0	Less than 10,000	9.0	4.9	2.4	19.3
1	10,000 to 14,999	5.4	3.8	2.7	9.7
2	15,000 to 24,999	11.1	10.4	7.5	14.3
3	25,000 to 34,999	10.4	10.9	8.7	10.6
4	35,000 to 49,999	12.9	13.8	12.4	11.3

All Data has been pre-Processed to make the data suitable and exportable to a CSV File with no significant changes to columns. 'Total population' Numbers reflect full extent of Latino population

Population Age Demography by Race

return to data menu
Table Extracted from General Census Table S0201 Product: 2019: ACS 1-Year Estimates Selected Population Profiles. taking the full estimate and disregarding for our purpose the 10% variability on the available Census estimations.

	Label	Total Population	Other Races	Latino	White American	Black American
0	population	2716940	106731	1886364	347010	416126
1	18 to 34 years	608544	26007	402966	78772	107473
2	35 to 64 years	1106670	42212	804772	124957	151676
3	65 years and over	452047	10772	318020	68626	57126

All Data has been pre-Processed to remove additional fields, Column names and other changes to make the data suitable and exportable to a CSV File. 'Total population' Numbers reflect full extent of general Miami-Dade population, for this report we have again excluded population details belonging to Age Range under 18 years old as won't represent a target for the Restaurant project.

Place of Origin Demography

return to data menu
Table Extracted from General Census Table S0201 Product: 2019: ACS 1-Year Estimates Selected Population Profiles. Taking the full estimate and disregarding for our purpose the 10% variability on the available Census estimations.

	WORLD REGION OF BIRTH OF FOREIGN BORN	Total population	Other race alone	Hispanic or Latino	White	Black or African American
0	Foreign-born population excluding population b...	1483944	63816	1249405	75320	120845
1	Europe	3.3%	0.0%	1.0%	44.6%	1.0%
2	Asia	2.5%	0.0%	1.0%	14.1%	5.0%
3	Africa	0.7%	0.0%	1.0%	3.4%	4.2%
4	Oceania	0.0%	0.0%	0.0%	6.0%	0.0%

All Data has been pre-Processed to make the data suitable and exportable to a CSV File. No Major Chances to Data have been performed to the available information

Graphic Geographical Data

return to data menu

Sources:

Miami Neighborhoods

This is a data frame previously defined on the report as support for coordinates of neighborhoods with the same source of neighborhoods in Miami in Miami-Dade County, Florida, United States. Many of the city's neighborhoods have been renamed, redefined and changed since the city's founding in 1896. As such, the exact extents of some neighborhoods can differ from person to person. The following is the list of all the city's major neighborhoods, including any corresponding sub-neighborhoods within them.

Geocoder

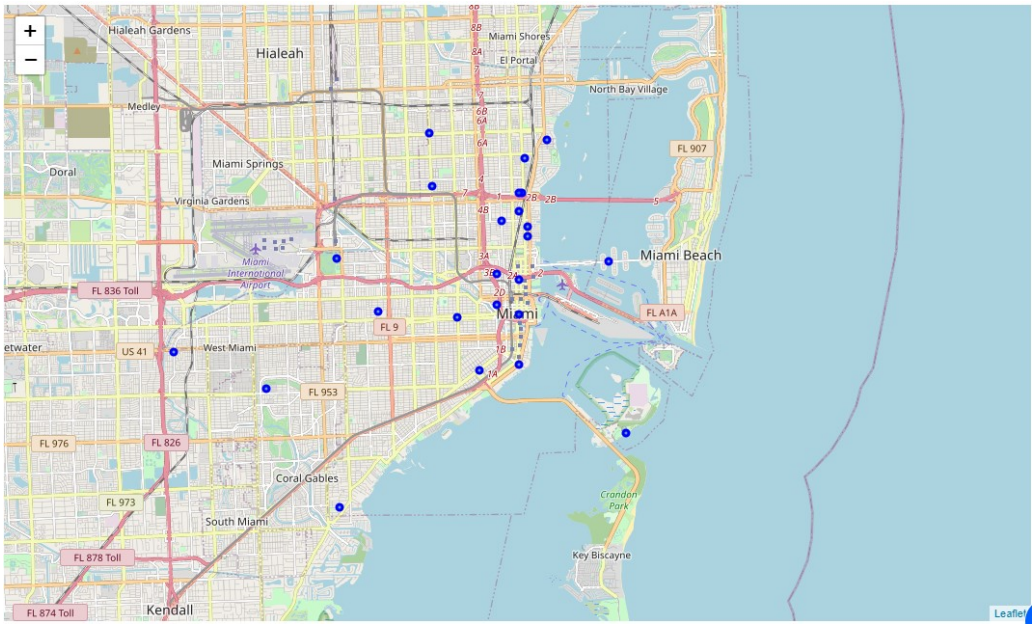
Geocoder API Geocoder is a simple and consistent geocoding library written in Python. Dealing with multiple different geocoding provider such as Google, Bing

this data will clarify the different neighborhoods in the Miami Dade area and serve for graphic maps demonstration further analysis in this report in combination with additional variables.

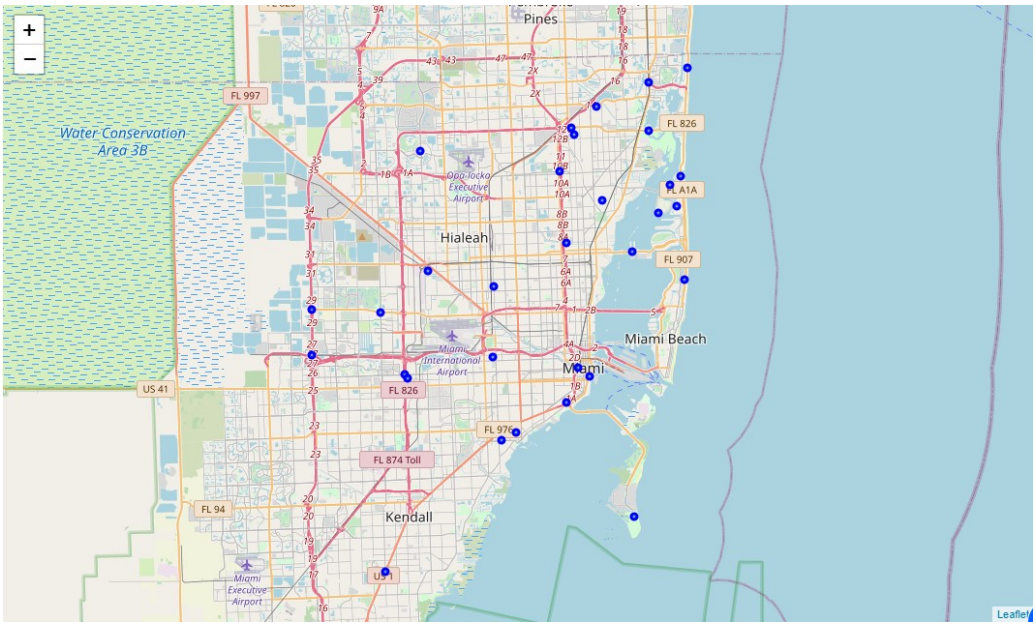
Miami Area Maps

Miami Neighborhoods Map

For Ilustrative purpose report will use graphical depictions of Miami-Dade Area to locate Official Neighborhoods and Communities. This data would be crossed with the Venue information explained ahead in this report



Miami Communities Map



Venue Data

return to data menu

Source:

Foursquare venue information

this information will provide a view of the different restaurant offerings and will support our analysis on possible locations for further analysis and similar offerings to the one proposed by the Stakeholders. Foursquare provides access to global POI data and rich content from over 100K trusted sources and driven by millions of consumers. Connect to our API to search, discover and rank venues and get real-time data access.

Aventura
Bal Harbour
Bay Harbor Islands
Biscayne Park
Coral Gables
Cutler Bay
Doral
El Portal
Florida City
Golden Beach
Hialeah
Hialeah Gardens
Homestead
Indian Creek
Key Biscayne
Medley
Miami
Miami Beach
Miami Gardens
Miami Lakes
Miami Shores
Miami Springs
North Bay Village
North Miami
North Miami Beach
Opa-locka
Palmetto Bay
Pinecrest
South Miami
Sunny Isles Beach
Surfside
Sweetwater
Virginia Gardens
West Miami

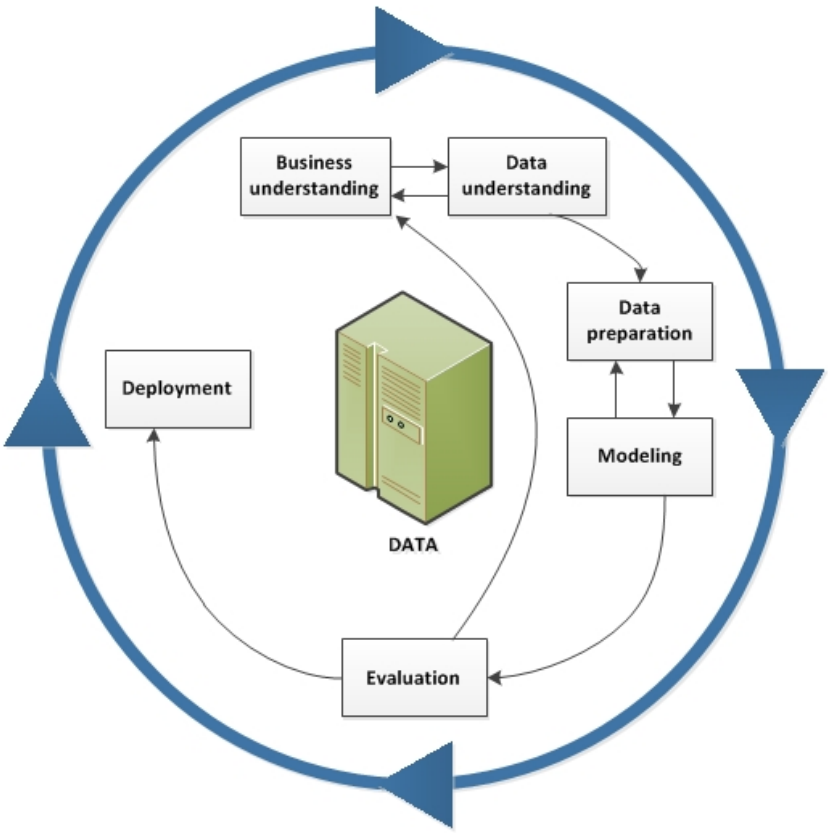
	Community	Community Latitude	Community Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Aventura	25.95701	-80.147	Nordstrom	25.957253	-80.145240	Women's Store
1	Aventura	25.95701	-80.147	Aventura Mall	25.956054	-80.146718	Shopping Mall
2	Aventura	25.95701	-80.147	Turnberry Isle Resort & Golf Club	25.959627	-80.137067	Golf Course
3	Aventura	25.95701	-80.147	Mystic Pointe Tower	25.953201	-80.127895	Residential Building (Apartment / Condo)
4	Aventura	25.95701	-80.147	Houston's	25.936259	-80.148407	American Restaurant

There are 118 uniques categories related to Food. and 274 unique Venues

Methodology

return to main

The project will follow as a guideline methodology the CRISP-DM which stands for Cross-Industry Standard Process for Data Mining, following 6 Steps to cover the problem presented for a Data Science approach.



1. Business Understanding: Covered by the initial problem statement, will be taken as an iterative approach as stakeholders prepare the proposal and concept to be deployed. Mestiza Group mission present as “To provide memorable gastronomic experiences with a emotive, passional, and cultural, filled with the roots of our forefathers and influence to our table using latin american and local ingredients, places, colors and inspirations to tell our story”. in this case the group aims to a wide public in United States, opening their first location in Florida a conundrum of Latino Culture and global vacation hub.

2. Data Understanding: Based on the initial question our analysis have selected data relevant from trustworthy sources to provide an initial assessment of the proposed area, and will incorporate to this report Data sets as required providing an initial sample for discussion. all data sources are listed on Data Sections, including Miami-Dade Area

Census Data, geographical and location data of Cities, Town and neighborhoods along with venue information such as category, location, and gastronomic offering of restaurant in the defined city areas.
3. Data Preparation: Data will be processed, cleaned and submitted for exploratory analysis to gain insights on the data and variables to be used as well highlight area characteristics and relevant information for the analysis in scope
4. Modeling: Once data is ready will be processed through appropriate models analytical and graphical models, in this case we will approach our analysis with partitioning clustering K-Mean that divides the data into non-overlapping subsets or clusters without any cluster internal structure or labels. this will give meaningful insights.
5. Conclusion and result analysis: For the present problem statement report will provide with result analysis of the areas and demographic analysis and suggest possible solutions and next steps into the project
6. Deployment: Final report and analytics to be defined in next stages with stakeholders based on the iterative feedback from phase 1
The project we will focus the efforts on detecting areas of Miami-Dade County in Florida restaurant demography and influence, particularly those with Latin American influence. We will limit our analysis to an area 5km around each city center or neighborhood depending on the most optimal approach.

it will be presented maps of all clustering area locations to identify general zones, and communities which should be a initial step for exploration and search for optimal venue location by stakeholders.

Data Exploratory Analysis

This section present the analysis performed on the data sets defined during the Data section, these have been processed and some descriptive statistics performed for illustrative purposes in order to provide insight and gather information of interest of the different, demographic tables, neighborhoods and community locations along with a sample of venues in line with the development project.

Miami Demographic Analysis

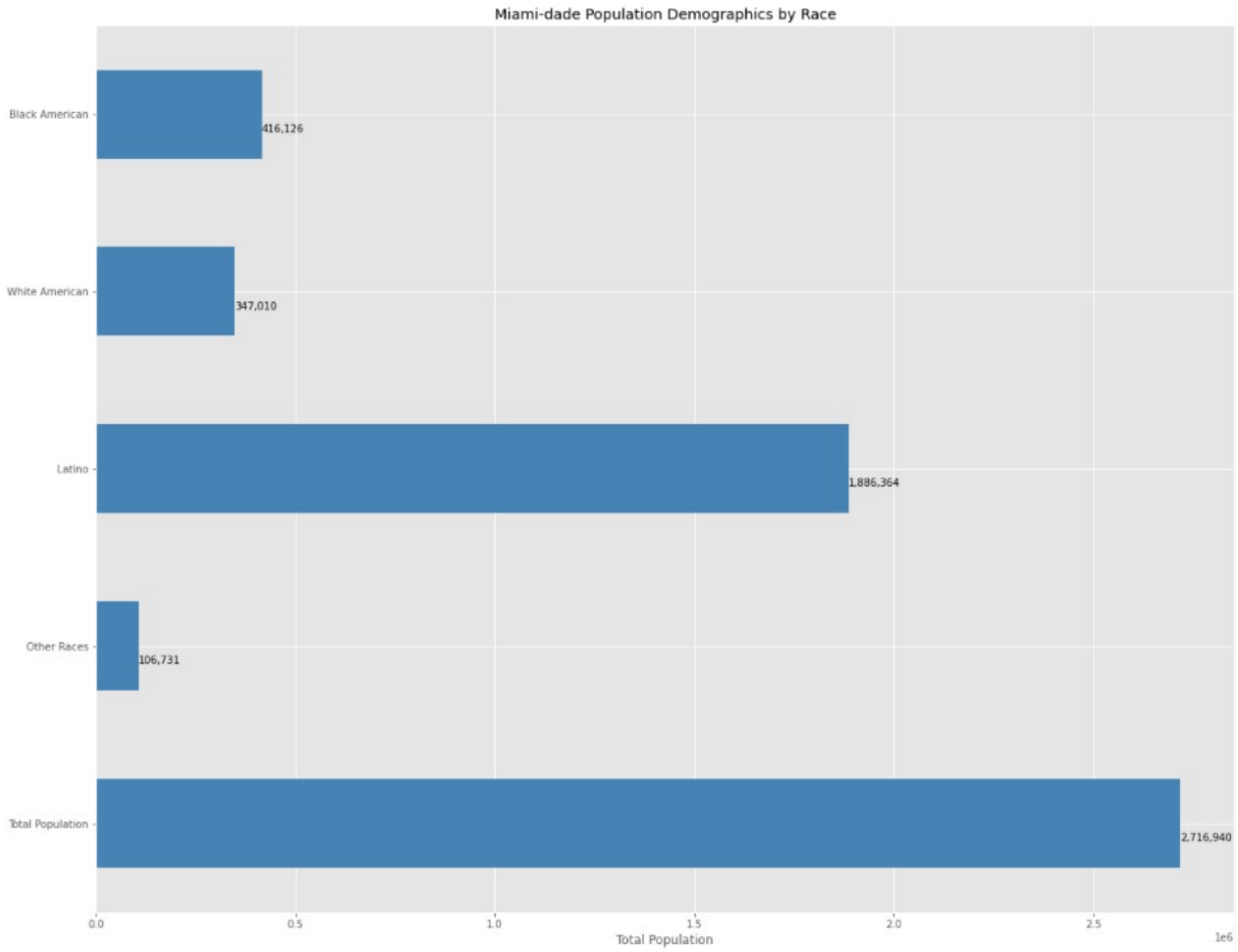
return to exploratory Analysis

During this phase 1 Analysis will be presented demographic studies extracted from latest Census data, the intention with the information is bringing clarity over the diversity of the target audience, provide background for initial discussion over the restaurant proposal, cuisine, and clientele. Based on the feedback of the stakeholders a more in depth analysis can be considered once target areas are defined for Phase 2

Miami-dade Population Demographics by Race

return to exploratory Analysis

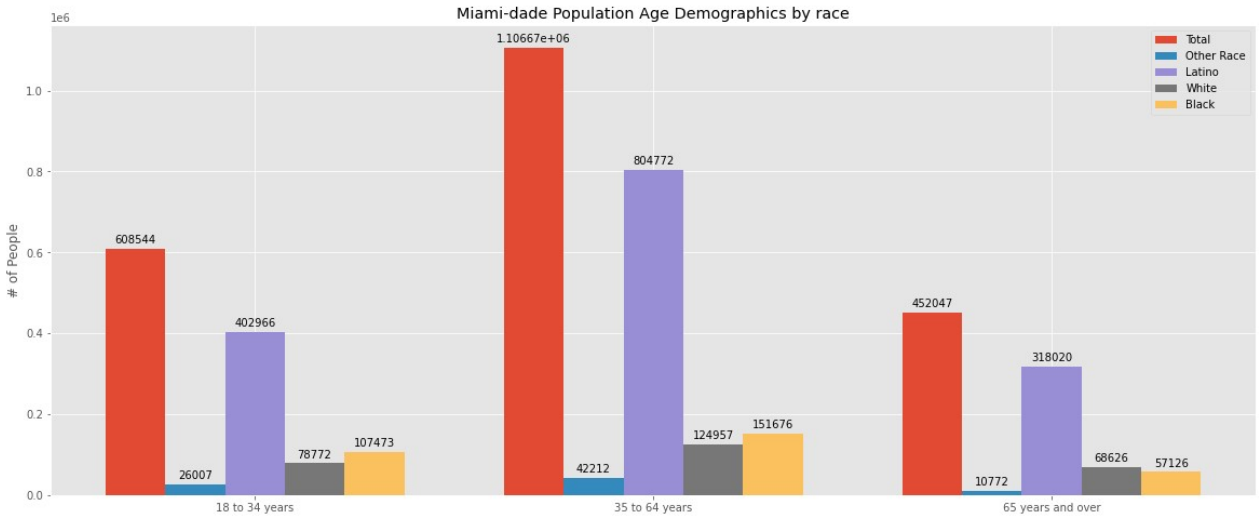
Label	population	18 to 34 years	35 to 64 years	65 years and over
Total Population	2716940	608544	1106670	452047
Other Races	106731	26007	42212	10772
Latino	1886364	402966	804772	318020
White American	347010	78772	124957	68626
Black American	416126	107473	151676	57126



Race Demographics by Age Range

return to exploratory Analysis

Label	Total Population	Other Races	Latino	White American	Black American
18 to 34 years	608544	26007	402966	78772	107473
35 to 64 years	1106670	42212	804772	124957	151676
65 years and over	452047	10772	318020	68626	57126



Based on this initial exploratory analysis we have evidenced the strong presence of latino population on the Miami-Dade area quantifying out of Total population, totaling 1,8MM out of 2.8MM in Miami-Dade County.

Label	18 to 34 years	35 to 64 years	65 years and over
count	4.000000	4.00000	4.000000
mean	153804.500000	280904.25000	113636.000000
std	169499.398265	352340.22151	138531.707745
min	26007.000000	42212.00000	10772.000000
25%	65580.750000	104270.75000	45537.500000
50%	93122.500000	138316.50000	62876.000000
75%	181346.250000	314950.00000	130974.500000
max	402966.000000	804772.00000	318020.000000

Also on the second part of the study we can see the Age Range 35 - 64 that represent the majority of the population tell us Miami-Dade different to the conception people have of Florida as an State preferred by the Retired, is significantly young.

Latino Population Demographics

return to exploratory Analysis
Table Extracted from General Census Table S0201 Product: 2019: ACS 1-Year Estimates Selected Population Profiles. taking the full estimate and disregarding for our purpose the 10% variability on the available Census estimations.

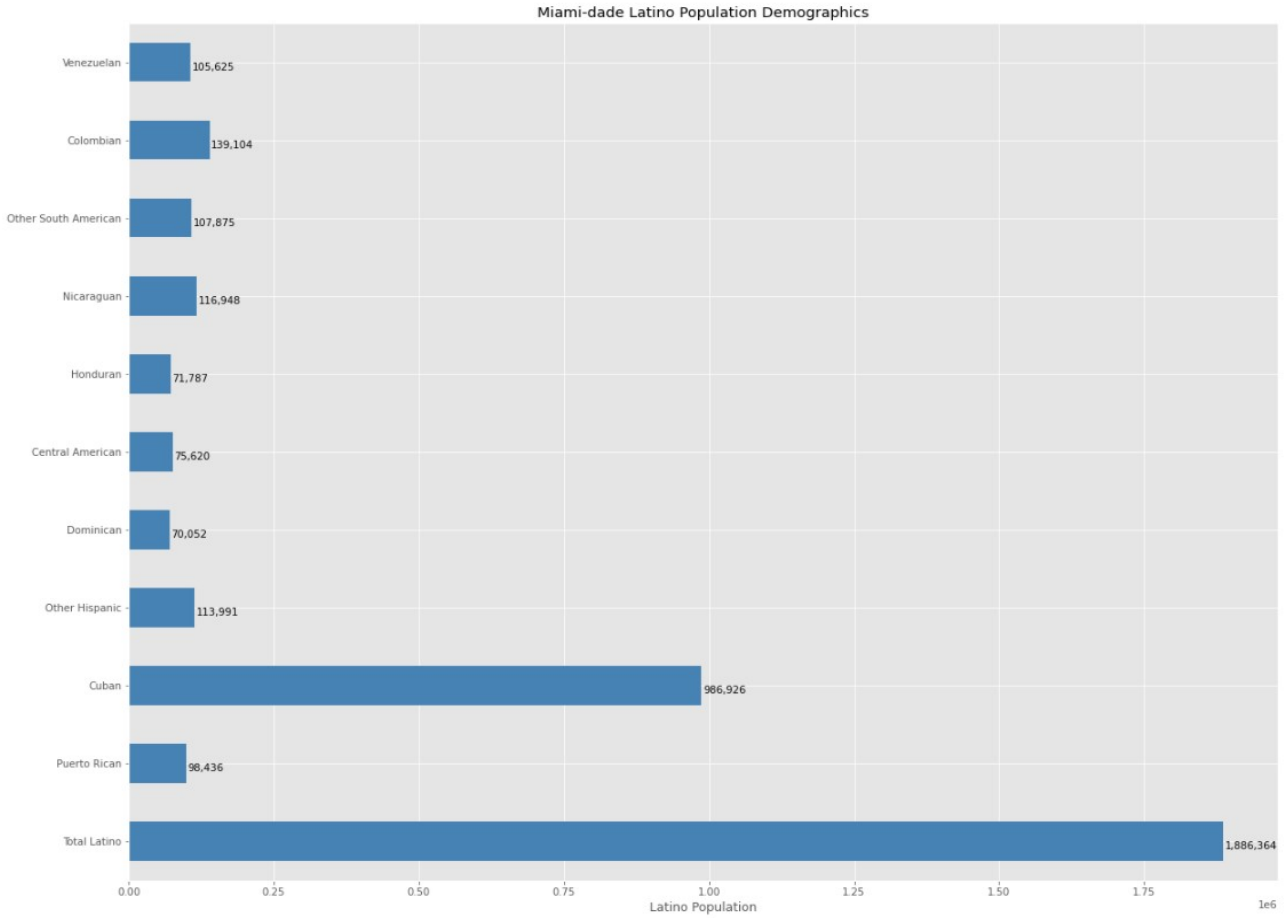
All Data has been pre-Processed to remove additional fields, Column names and other changes to make the data suitable and exportable to a CSV File. 'Total population' Numbers reflect full extent of Latino population, for this report we have exclude population details belonging to Age Range under 18 years old as won't represent a target for the Restaurant project.

Other Hispanic Field, Central American and Other South American fields have been modified to exclude countries already represented. Total Population difference with sum of individual Values account for population under 18 years Old and Mexican Populatio not segregate on the Original data.

Label	Total population	18 to 34 years	35 to 64 years	65 years and over
Total Latino	1886364	402966	804772	318020
Puerto Rican	98436	23195	40299	12146
Cuban	986926	183044	420769	220760
Other Hispanic	113991	30815	42547	8087
Dominican	70052	16862	28236	11107
Central American	75620	20388	27352	7584
Honduran	71787	19405	27290	5191
Nicaraguan	116948	24880	57517	10534
Other South American	107875	22236	51425	17072
Colombian	139104	33429	63911	19310
Venezuelan	105625	28712	45426	6229

Based on the Graphic and percentual division we can see the Cuban population as a majority among the latino community with a 52.32%, in Later years the presence of Venezuelan population has become a significant % ranked among the following top Latino Communities in Miami-Dade.

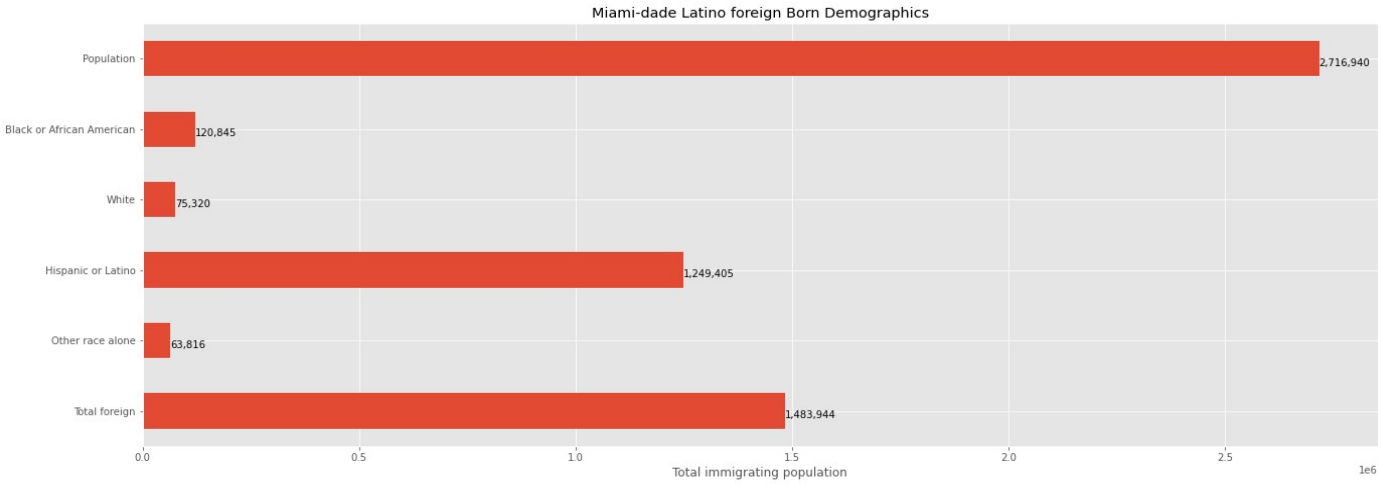
Label	Puerto Rican	Cuban	Other Hispanic	Dominican	Central American	Honduran	Nicaraguan	Other South American	Colombian	Venezuelan
Total population in %	5.22	52.32	6.04	3.71	4.01	3.81	6.2	5.72	7.37	5.6

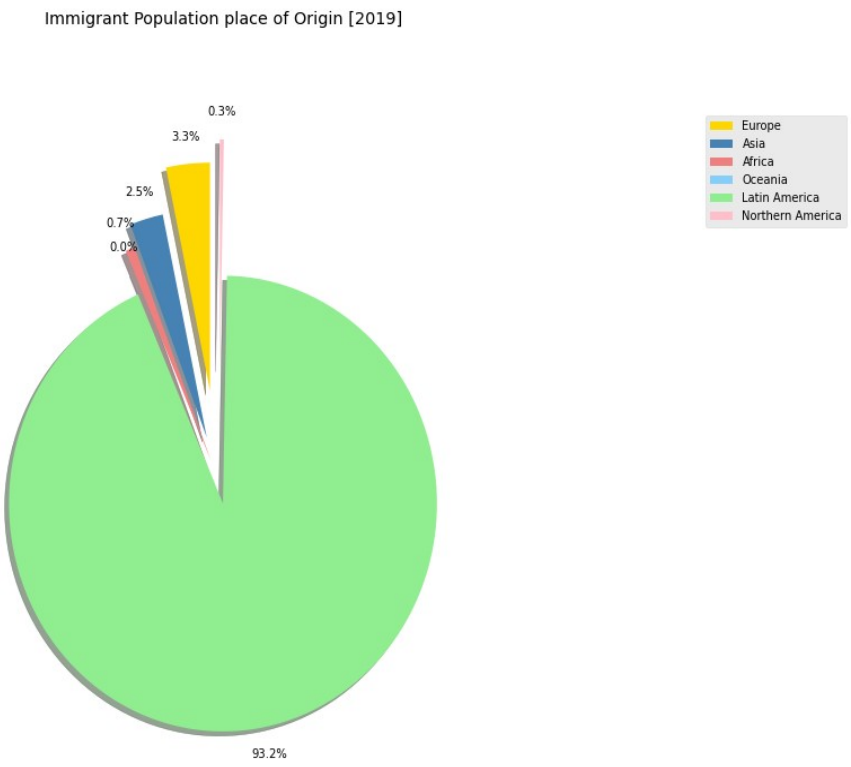


Immigrant Population in Miami

return to exploratory Analysis

To highlight the importance of the traditions and food, it has been included a descriptive statistic for the Immigrant portion of Miami Population that was born overseas or has been directly influenced by their homeland culture. the following tables will provide detail about the Continent of Origin





Income Demographics

return to exploratory Analysis

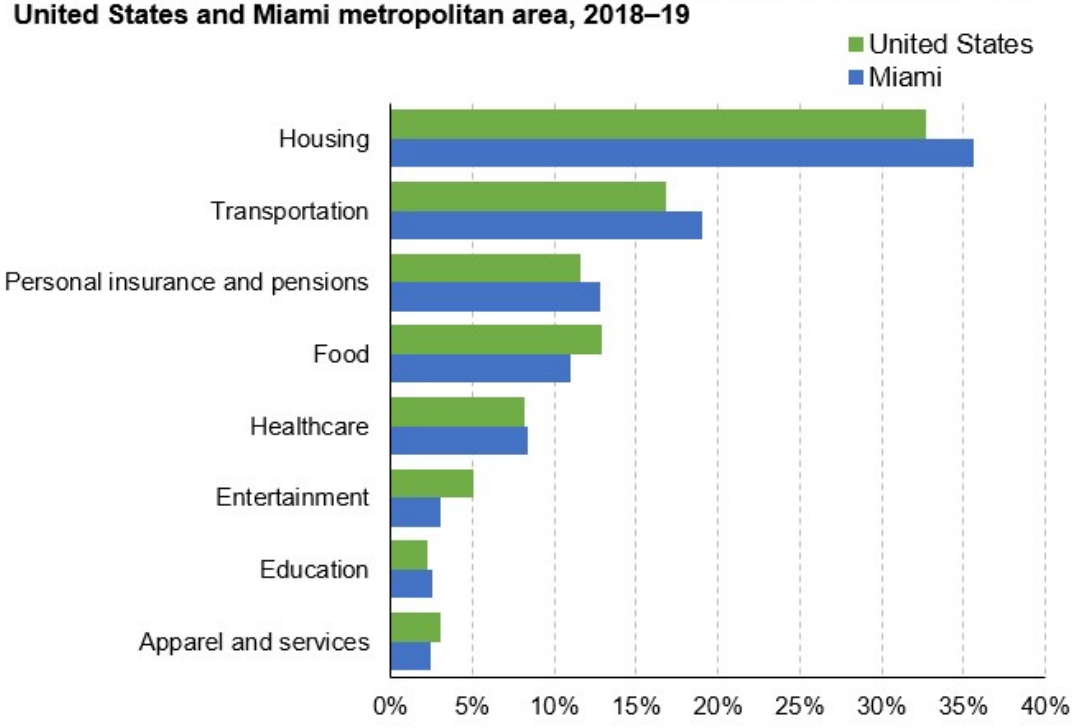
Income Range USD	Less than 10,000	10,000 to 14,999	15,000 to 24,999	25,000 to 34,999	35,000 to 49,999	50,000 to 74,999	75,000 to 99,999	100,000 to 149,999	150,000 to 199,999	200,000 or more
Household income	9.0	5.4	11.1	10.4	12.9	16.8	11.1	11.9	5.0	6.4
Family Income	4.9	3.8	10.4	10.9	13.8	17.6	11.8	13.6	5.7	7.6
Married no Kids	2.4	2.7	7.5	8.7	12.4	17.3	13.4	17.0	7.7	10.9
Singles or non Family household	19.3	9.7	14.3	10.6	11.3	13.8	8.1	6.9	2.7	3.3

Table expressed in %

According to Miami-Dade Beacon Council for 2020 Households in Miami-Dade County earn a median yearly income of $52,269. 34.5-percent of the households earn more than the national average each year.
Based on the information provided by U.S Bureau of Labor, Households in the Miami-Fort Lauderdale-West Palm Beach, FL, metropolitan area spent an average of $57,472 per year in 2018–19, the U.S. Bureau of Labor Statistics reported today. Regional Commissioner Janet S. Rankin noted that this figure was significantly lower than the $62,395 average expenditure level for households in the United States.

Miami-area households allocated their dollars similarly to the nation in five major components, with three differing significantly from their respective U.S. averages. For example, the share of expenditures for entertainment, which accounted for 3.0 percent of the average household's budget in the Miami area, was significantly lower than the national average of 5.1 percent.

Chart 1. Shares of average expenditures for selected major components in the United States and Miami metropolitan area, 2018–19



Source: U.S. Bureau of Labor Statistics.

Food: The portion of a Miami household's budget spent on food, 11.0 percent, was significantly lower than the 12.9-percent U.S. average. Miami-area households spent $3,954, or 62.7 percent, of their food dollars on food at home and $2,350 (37.3 percent) on food away from home. In comparison, the average U.S. household spent 56.6 percent of its food budget on food at home and 43.4 percent on food away from home.

Miami Venues Analysis

return to exploratory Analysis
From the initial data we have select a sub-List of applicable categories according to the proposal development will be, this include Full Restaurant service with a Latin American influence. Since the Nationalities of the restaurant might influence we select from the unique Sub-Categories of the Primary Category Food we defined Above on our data Section. Also we kept Spanish Restaurants on the list due to the influence on Latin American cuisine

it has been defined a list of categories of interes from Foursquare Categories.
This include Latin American restaurants and venues with matching categories ID, this will help with the Limit encounter on the API for results, this way will pre-set our categories and allow the data to be more specific to Restaurants and Food proposal desired to evaluate
List: Latin american restaurant,south american rest,argentinian,brazilian,colombian,peruvian,venezuelan,mexican,molecular,spanish, tapas.

Iterate Venue information request on each community Defined

Aventura
Bal Harbour
Bay Harbor Islands
Biscayne Park
Coral Gables
Cutler Bay
Doral
El Portal
Florida City
Golden Beach
Hialeah
Hialeah Gardens
Homestead
Indian Creek
Key Biscayne
Medley
Miami
Miami Beach
Miami Gardens
Miami Lakes
Miami Shores
Miami Springs
North Bay Village
North Miami
North Miami Beach
Opa-locka
Palmetto Bay
Pinecrest
South Miami
Sunny Isles Beach
Surfside
Sweetwater
Virginia Gardens
West Miami

(2320, 7)
There are 52 uniques categories related to Restaurants of interest. and 791 unique Venues

	Community	Community Latitude	Community Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
0	Aventura	25.95701	-80.147	Cvi.Che 105	25.958353	-80.142053	Peruvian Restaurant
1	Aventura	25.95701	-80.147	Novecento	25.950201	-80.144883	Argentinian Restaurant
2	Aventura	25.95701	-80.147	La Estancia Argentina	25.941305	-80.149114	Argentinian Restaurant
3	Aventura	25.95701	-80.147	Chipotle Mexican Grill	25.950185	-80.145676	Mexican Restaurant
4	Aventura	25.95701	-80.147	Chipotle Mexican Grill	25.957264	-80.146385	Mexican Restaurant

Grouping by Community will help analyze the Venues tied to each Community center previously defined in Geographical Data.

Community	Community Latitude	Community Longitude	Venue	Venue Latitude	Venue Longitude	Venue Category
Aventura	73	73	73	73	73	73
Bal Harbour	64	64	64	64	64	64
Bay Harbor Islands	73	73	73	73	73	73
Biscayne Park	54	54	54	54	54	54
Coral Gables	93	93	93	93	93	93
Cutler Bay	25	25	25	25	25	25
Doral	100	100	100	100	100	100
El Portal	43	43	43	43	43	43
Florida City	29	29	29	29	29	29
Golden Beach	56	56	56	56	56	56
Hialeah	75	75	75	75	75	75
Hialeah Gardens	58	58	58	58	58	58
Homestead	28	28	28	28	28	28
Indian Creek	74	74	74	74	74	74
Key Biscayne	14	14	14	14	14	14
Medley	84	84	84	84	84	84
Miami	100	100	100	100	100	100
Miami Beach	100	100	100	100	100	100
Miami Gardens	56	56	56	56	56	56
Miami Lakes	76	76	76	76	76	76
Miami Shores	100	100	100	100	100	100
Miami Springs	100	100	100	100	100	100
North Bay Village	81	81	81	81	81	81
North Miami	43	43	43	43	43	43
North Miami Beach	35	35	35	35	35	35
Opa-locka	25	25	25	25	25	25
Palmetto Bay	100	100	100	100	100	100
Pinecrest	27	27	27	27	27	27
South Miami	100	100	100	100	100	100
Sunny Isles Beach	74	74	74	74	74	74
Surfside	60	60	60	60	60	60
Sweetwater	100	100	100	100	100	100
Virginia Gardens	100	100	100	100	100	100
West Miami	100	100	100	100	100	100

(2320, 53)

Hot Encoding to determine the number of ocurrence of each unique venue type per Community will support defining the most relevant

	Community	American Restaurant	Arepa Restaurant	Argentinian Restaurant	BBQ Joint	Bakery	Bar	Brazilian Restaurant	Breakfast Spot	Burger Joint	Burrito Place	Butcher	Café	Chinese Restaurant
0	Aventura	0.000000	0.013699	0.109589	0.0	0.013699	0.0	0.109589	0.000000	0.000000	0.013699	0.000000	0.013699	0.0
1	Bal Harbour	0.000000	0.000000	0.093750	0.0	0.000000	0.0	0.156250	0.015625	0.015625	0.031250	0.000000	0.000000	0.0
2	Bay Harbor Islands	0.000000	0.000000	0.095890	0.0	0.000000	0.0	0.150685	0.013699	0.013699	0.027397	0.000000	0.000000	0.0
3	Biscayne Park	0.000000	0.000000	0.037037	0.0	0.000000	0.0	0.092593	0.000000	0.018519	0.037037	0.018519	0.000000	0.0
4	Coral Gables	0.010753	0.000000	0.075269	0.0	0.021505	0.0	0.010753	0.000000	0.000000	0.000000	0.000000	0.032258	0.0

Descriptive statistic of the Venues occurrences in the complete Data Set

	American Restaurant	Arepa Restaurant	Argentinian Restaurant	BBQ Joint	Bakery	Bar	Brazilian Restaurant	Breakfast Spot	Burger Joint	Burrito Place	Butcher	Café	Chinese Restaurant
count	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000	34.000000
mean	0.004196	0.000928	0.059912	0.002227	0.017016	0.002451	0.059555	0.002407	0.004918	0.009951	0.001592	0.008543	0.000350
std	0.008806	0.003803	0.041893	0.009057	0.025012	0.005704	0.047626	0.005359	0.008920	0.014893	0.005366	0.010782	0.002042
min	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
25%	0.000000	0.000000	0.017500	0.000000	0.000000	0.000000	0.020952	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
50%	0.000000	0.000000	0.070000	0.000000	0.005000	0.000000	0.040000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
75%	0.000000	0.000000	0.085489	0.000000	0.028452	0.000000	0.104229	0.000000	0.011759	0.017857	0.000000	0.013652	0.000000
max	0.037037	0.017857	0.142857	0.040000	0.111111	0.020000	0.156250	0.016667	0.040000	0.046512	0.023256	0.034483	0.011905

Highlight the Top 10 Venues by Community

Given the diversity of the communities, we will approach our Communities based on the Top Restaurant Venues Categories as areas with significant population of each cuisine, this information should help to guide the gastronomic proposal and theme of the Restaurant by our Stakeholders and provide an starting point for further analysis on the selected Areas.

	Community	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
0	Aventura	Mexican Restaurant	Cuban Restaurant	Peruvian Restaurant	Argentinian Restaurant	Brazilian Restaurant	South American Restaurant	Taco Place	Spanish Restaurant	Venezuelan Restaurant	Latin American Restaurant
1	Bal Harbour	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Burrito Place	Latin American Restaurant	Food Truck	Fast Food Restaurant
2	Bay Harbor Islands	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Burrito Place	Restaurant	Burger Joint	Breakfast Spot
3	Biscayne Park	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Tapas Restaurant	South American Restaurant	Burrito Place	Spanish Restaurant	Peruvian Restaurant	Taco Place	Tex-Mex Restaurant
4	Coral Gables	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Argentinian Restaurant	South American Restaurant	Tapas Restaurant	Taco Place	Café	Bakery	Grocery Store

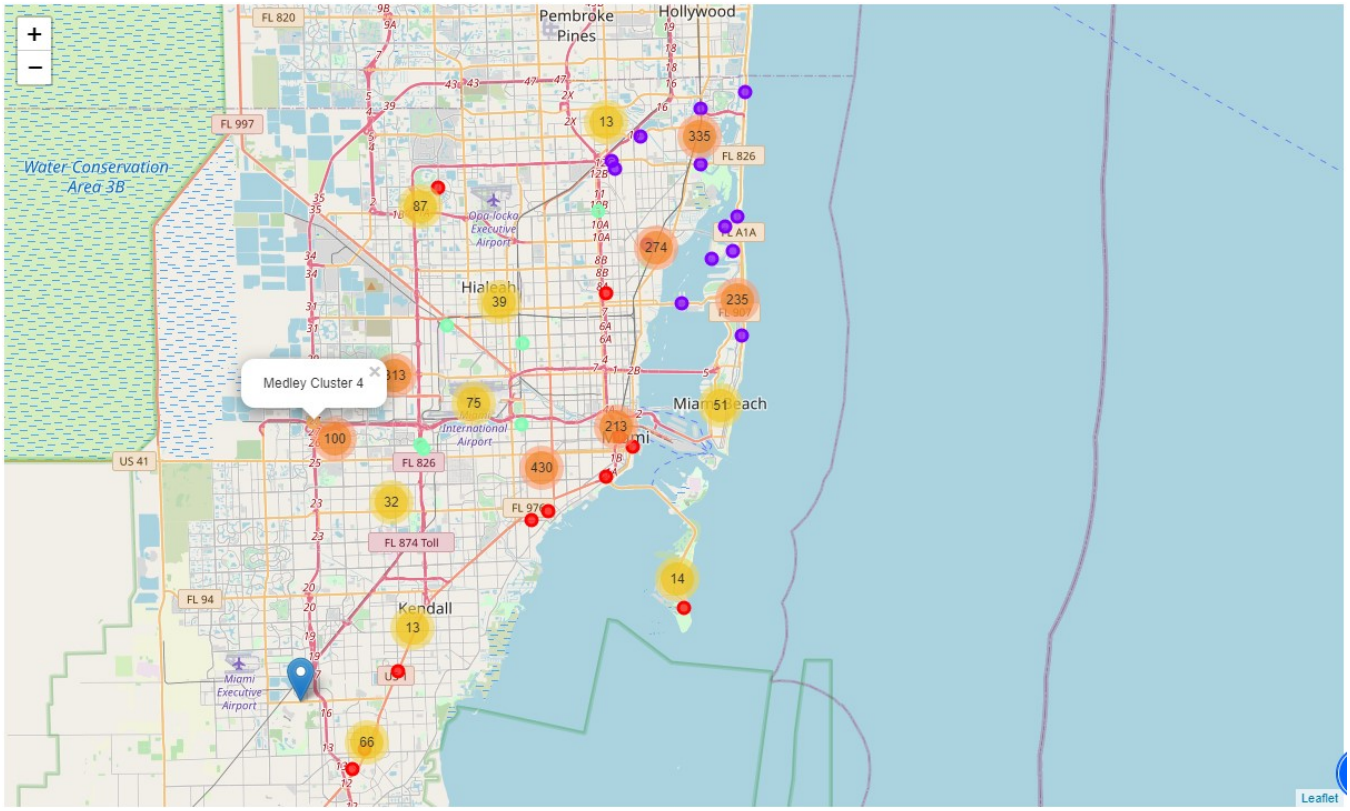
in this case please note that Mexican Restaurant is Present significantly on the top Venues, but from deeper analysis this include chain restaurants such as Chipotle Mexican Grill that are not part of our Scope, it is recommended to treat this point as an outlier and don't assign excessive weight on the influence cuisine

Evaluate Clusters crossing Communities and Venues nearby with the desired characteristics

Once we have determined the Top Restaurant Venues Categories by Community we will create clusters on the Miami-Dade Area to find out the concentration of these venues around the communities. On one side we could take this clusters as places where direct competition is already positioned with a functioning business, but one important aspect to consider is that these are proven working locations by other businesses that will provide both the traffic and the public to the Venture, on Communities targeted for the project.

	Community	Latitude	Longitude	Cluster Labels	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
0	Aventura	25.957010	-80.147000	1	Mexican Restaurant	Cuban Restaurant	Peruvian Restaurant	Argentinian Restaurant	Brazilian Restaurant	South American Restaurant	Taco Place	Spanish Restaurant	Venezuelan Restaurant	Latin American Restaurant
1	Bal Harbour	25.896858	-80.124383	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Burrito Place	Latin American Restaurant	Food Truck	Fast Food Restaurant
2	Bay Harbor Islands	25.891075	-80.131900	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Burrito Place	Restaurant	Burger Joint	Breakfast Spot
3	Biscayne Park	25.881260	-80.179990	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Tapas Restaurant	South American Restaurant	Burrito Place	Spanish Restaurant	Peruvian Restaurant	Taco Place	Tex-Mex Restaurant
4	Coral Gables	25.728414	-80.251520	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Argentinian Restaurant	South American Restaurant	Tapas Restaurant	Taco Place	Café	Bakery	Grocery Store

Graphical Depiction of Venue Clusters



Cluster Analysis

Once the clusters have been defined, we will proceed with cluster analysis on each of the 5 and provide insights on the findings.

	Community	Cluster Labels	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
4	Coral Gables	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Argentinian Restaurant	South American Restaurant	Tapas Restaurant	Taco Place	Café	Bakery	Grocery Store
5	Cutler Bay	0	Mexican Restaurant	Cuban Restaurant	Spanish Restaurant	Peruvian Restaurant	Venezuelan Restaurant	BBQ Joint	Bakery	Brazilian Restaurant	South American Restaurant	Sandwich Place
7	El Portal	0	Mexican Restaurant	Spanish Restaurant	Tapas Restaurant	Cuban Restaurant	Argentinian Restaurant	Venezuelan Restaurant	Brazilian Restaurant	Taco Place	Pub	Sandwich Place
12	Homestead	0	Mexican Restaurant	Cuban Restaurant	Spanish Restaurant	Bakery	Peruvian Restaurant	Sandwich Place	Venezuelan Restaurant	BBQ Joint	Brazilian Restaurant	Health Food Store
14	Key Biscayne	0	Spanish Restaurant	Argentinian Restaurant	Mexican Restaurant	Peruvian Restaurant	Cuban Restaurant	Sandwich Place	Seafood Restaurant	Latin American Restaurant	Supermarket	Peruvian Roast Chicken Joint
16	Miami	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Peruvian Restaurant	Argentinian Restaurant	South American Restaurant	Tapas Restaurant	Brazilian Restaurant	Taco Place	Bakery
19	Miami Lakes	0	Cuban Restaurant	Mexican Restaurant	Colombian Restaurant	Spanish Restaurant	Bakery	South American Restaurant	Peruvian Restaurant	Venezuelan Restaurant	Tapas Restaurant	Latin American Restaurant
27	Pinecrest	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Bakery	Peruvian Restaurant	Brazilian Restaurant	American Restaurant	Health Food Store	Sandwich Place	Venezuelan Restaurant
28	South Miami	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Bakery	Brazilian Restaurant	Tapas Restaurant	Bar
32	Virginia Gardens	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Argentinian Restaurant	Tapas Restaurant	South American Restaurant	Bakery	Grocery Store	American Restaurant	Colombian Restaurant
33	West Miami	0	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	Peruvian Restaurant	Argentinian Restaurant	Brazilian Restaurant	Taco Place	South American Restaurant	Tapas Restaurant	Sandwich Place

Cluster 1 Include the Communities listed on the table above, it is important to mention the most relevant communities such as Miami, Key Biscayne, Coral Gables, and West Miami correspond to the Southern Miami-Dade area, with excellent locations and plenty of Beach front properties. Key Biscayne for example and the areas surrounding have a rich gastronomic evidence since the start of the Cuban exodus, plenty of proposal have passed by and some new terrain for international Chef such as Antonio Bachour, Carlos Leal and others with their international and fusion cuisine. Households in Key Biscayne earn a median yearly income of **$126,628. 67.49-percent of the households earn more than the national average each year.

Household expenditures average **$141,427 per year**. The majority of earnings get spent on Shelter, Transportation, Food and Beverages, Health Care, and Utilities, with one of the highest spending in Food in the County with a Median of **$ 20,204** followed by Coral Gables with **$15,319** that also stands out as a planned community. The Gables Waterway runs through the city. Coral Gables has a robust downtown area and is a major employment center comprised of local and international businesses and the University of Miami.

also an important city included here is Miami, known for its booming downtown business and banking district along Brickell Avenue. The world famous **Little Havana and Calle Ocho are well-known Cuban cultural destinations** and historic **Overtown is a traditionally African-American neighborhood** with it roots in jazz and soul music. Downtown includes performing arts, sports venues and museums. **Wynwood and the Design District are known for its diverse offer with, art galleries, craft breweries, entrepreneurs and trendy restaurants**. Quaint “old Miami” neighborhoods including the Roads, Coconut Grove, West Flagler, Flagami and Coral Way connect urban areas with residential neighborhoods filled with tree-lined streets. The pintoresque scene might be ideal to bring that mixed with the Spanish heritage and the Latino representation in the country that the proposal will like to add to the County Scene.

Communities in the cluster have a good proximity with this interesting area, and may present more accessible options in terms of commercial rent and cost for the proposal, further details are recommended to take in consideration. From the Venue data clustered evidence of a strong Cuban & Spanish Venue presence coming on Top along with some Mexican proposals, setting aside the Chain restaurants as mention on the descriptive analysis above, that reinforce the facts on the Cities highlighted on the Top 5 Places in Venues.

Cluster 2

Cluster 2 is considered the competing option including some of the Luxury Areas, filled with Hotels and Tourist affluence, it can highlight **Miami Beach Area** considered a tourist mecca and a vibrant business community exhibiting more than 7 miles of Coast line beach, golf courses, parks, and other amenities among wich comes on our interest **art, culture and fine dining**. With Area is relatively small 7.1 square miles between Biscayne Bay and the Atlantic Ocean, which brings relevance to other cities on the cluster as optional locations.

	Community	Cluster Labels	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
0	Aventura	1	Mexican Restaurant	Cuban Restaurant	Peruvian Restaurant	Argentinian Restaurant	Brazilian Restaurant	South American Restaurant	Taco Place	Spanish Restaurant	Venezuelan Restaurant	Latin American Restaurant
1	Bal Harbour	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Burrito Place	Latin American Restaurant	Food Truck	Fast Food Restaurant
2	Bay Harbor Islands	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Burrito Place	Restaurant	Burger Joint	Breakfast Spot
3	Biscayne Park	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Tapas Restaurant	South American Restaurant	Burrito Place	Spanish Restaurant	Peruvian Restaurant	Taco Place	Tex-Mex Restaurant
9	Golden Beach	1	Mexican Restaurant	Argentinian Restaurant	Cuban Restaurant	Brazilian Restaurant	Peruvian Restaurant	Taco Place	South American Restaurant	Venezuelan Restaurant	Latin American Restaurant	Spanish Restaurant
13	Indian Creek	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Tex-Mex Restaurant	Burrito Place	Taco Place	Restaurant
17	Miami Beach	1	Mexican Restaurant	Cuban Restaurant	Peruvian Restaurant	Argentinian Restaurant	Brazilian Restaurant	Tapas Restaurant	Spanish Restaurant	American Restaurant	Coffee Shop	Grocery Store
18	Miami Gardens	1	Mexican Restaurant	Brazilian Restaurant	Peruvian Restaurant	Cuban Restaurant	South American Restaurant	Argentinian Restaurant	Venezuelan Restaurant	Tex-Mex Restaurant	Latin American Restaurant	College Academic Building
22	North Bay Village	1	Mexican Restaurant	Cuban Restaurant	Argentinian Restaurant	Brazilian Restaurant	Tapas Restaurant	Spanish Restaurant	Peruvian Restaurant	Taco Place	American Restaurant	Venezuelan Restaurant
23	North Miami	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Peruvian Restaurant	South American Restaurant	Tex-Mex Restaurant	Burrito Place	Spanish Restaurant	Café	Sandwich Place
24	North Miami Beach	1	Mexican Restaurant	Cuban Restaurant	Peruvian Restaurant	Brazilian Restaurant	South American Restaurant	Tex-Mex Restaurant	Latin American Restaurant	Café	Sandwich Place	College Academic Building
29	Sunny Isles Beach	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Peruvian Restaurant	Argentinian Restaurant	South American Restaurant	Burrito Place	Venezuelan Restaurant	Tex-Mex Restaurant	Taco Place
30	Surfside	1	Mexican Restaurant	Cuban Restaurant	Brazilian Restaurant	Argentinian Restaurant	Peruvian Restaurant	South American Restaurant	Restaurant	Burrito Place	Spanish Restaurant	Coffee Shop

Nearby another highly interesting area is Bal Harbour portrays deluxe oceanfront hotels, resorts, single-family and condo residences, ultra-chic shopping at the world famous Bal Harbour Shops and a wide selection of dining options. with median yearly income of **$64,843. 45.99-percent** of the households earn more than the national average each year. and expenditure in food ranging **$ 11,000**, in this case location on the other communities is what makes it interesting to consider naming as most relevant North Bay Village, North Miami, North Miami Beach all excellent location and distance to the centers with higher affluence make great options for locations.

on the Venue analysis again we see again Mexican Restaurant in 1st place, it is consider more relevant the Cuban and Brazilian influence in this case along with Peruvian cuisine proposals.

Cluster 3

	Community	Cluster Labels	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
8	Florida City	2	Mexican Restaurant	Sandwich Place	Cuban Restaurant	Tex-Mex Restaurant	Café	Pub	Market	Music Venue	New American Restaurant	Nightclub

Cluster 4

	Community	Cluster Labels	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
10	Hialeah	3	Cuban Restaurant	Spanish Restaurant	Mexican Restaurant	Brazilian Restaurant	Coffee Shop	Restaurant	Sandwich Place	Tex-Mex Restaurant	Taco Place	Café
20	Miami Shores	3	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	South American Restaurant	Argentinian Restaurant	Bakery	Coffee Shop	Tapas Restaurant	American Restaurant	Venezuelan Restaurant
21	Miami Springs	3	Cuban Restaurant	Mexican Restaurant	South American Restaurant	Spanish Restaurant	Peruvian Restaurant	Venezuelan Restaurant	Argentinian Restaurant	Bakery	Brazilian Restaurant	Grocery Store
25	Opa-locka	3	Cuban Restaurant	Mexican Restaurant	South American Restaurant	Tex-Mex Restaurant	Peruvian Restaurant	Sandwich Place	Spanish Restaurant	Restaurant	Latin American Restaurant	Burger Joint
26	Palmetto Bay	3	Cuban Restaurant	Mexican Restaurant	Spanish Restaurant	South American Restaurant	Argentinian Restaurant	Brazilian Restaurant	Bakery	Peruvian Restaurant	Winery	Café
31	Sweetwater	3	Cuban Restaurant	Mexican Restaurant	South American Restaurant	Spanish Restaurant	Argentinian Restaurant	Brazilian Restaurant	Bakery	Peruvian Restaurant	Paella Restaurant	Winery

Cluster 5

	Community	Cluster Labels	1st Restaurant Venue	2nd Restaurant Venue	3rd Restaurant Venue	4th Restaurant Venue	5th Restaurant Venue	6th Restaurant Venue	7th Restaurant Venue	8th Restaurant Venue	9th Restaurant Venue	10th Restaurant Venue
6	Doral	4	South American Restaurant	Cuban Restaurant	Mexican Restaurant	Argentinian Restaurant	Spanish Restaurant	Venezuelan Restaurant	Peruvian Restaurant	Tapas Restaurant	Brazilian Restaurant	Hotel
11	Hialeah Gardens	4	Mexican Restaurant	South American Restaurant	Cuban Restaurant	Argentinian Restaurant	Taco Place	Spanish Restaurant	Peruvian Restaurant	Brazilian Restaurant	Sushi Restaurant	Burrito Place
15	Medley	4	Mexican Restaurant	Cuban Restaurant	South American Restaurant	Spanish Restaurant	Argentinian Restaurant	Taco Place	Peruvian Restaurant	Venezuelan Restaurant	Latin American Restaurant	Bakery

For remaining Clustes is evidenced that these areas tend to be more residential, it's recommended that if any Community on Clusters 3, 4 or 5 is of interest a density analysis and sub-Clusters are created for the Commercial areas and in more detail Restaurant analysis. Given the initial problem statement these are not consider of full interest to the proposal development

Results and Discussion

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Demographic Analysis Discussion

Our analysis shows initially details about Miami-Dade Demographics, that evidence a significant presence of Latino population serving as 69.42% of the Total population of Miami-Dade Area confirming our initial assessment of the importance of this community in our proposal Development. This can be interpreted as a complex factor also due to the difference and origin of this communities and what this represent to the gastronomic offering.

Going further on the analysis we see that Cuban community holds the lead as the most represented among the Latino Population with a 52.32% due massive exodus during the 60s, followed by Puerto Ricans, Colombians and Venezuelans as the most representative groups both Puerto Rican & Venezuelan exodus driven by recent country crisis and population being forced to leave their homes this is a key fact, the immigration and the direct connection of these communities with their homeland, their customs and their food creating a high demand for this cuisines and more vanguard proposals that will help this communities thrive both economically and culturally. It can be highlighted that Out of the 1.8 MM of Latino ~1.3MM are foreign born 66.23% and 93.2% of those are Latino immigrant Population.

Our initial indications have been confirmed with census data in terms of diversity, we also focused the effort in understanding what Age groups make Miami-Dade area population. Florida has been historically known as a retiree community, and in order to determine our focus for the proposal we confirmed that in all race groups but specially Latino is most represented by the Age Group 35 to 64 Years with approximately ~72% . With this finding we could say that the majority of the population fits in a young adult range this is important as will present a group that will continue working, and accumulating wealth on the years to come and drive the expenditure at least 15 years more given the median age of 49 years Old, as defined by Census reports.

Another important metric reviewed was the income vs the household, showing a median household ~ 52k USD, income analysis will drive the pricing on the menu offerings of our proposal and significant part of the budgeting. The data shown that Households Married with No kids and Family Households hold a majority of % over the 50k joint income with significant % of people on the top tiers over 100k USD, from this we can infer that a considerable amount of people have an excellent range for Top Tier Restaurant experiences and more sophisticated proposals, confirmed by the Miami-Dade beacon Council.

Miami Venue Analysis discussion

This analysis effort has been focused on narrowing the area of interest to Venues on the Food Categories, more specifically defined by Latin American Cuisine and others in-line with the interest such a Molecular Gastronomy and Spanish Restaurants due to the proximity to Latin-America Gastronomy.

Foursquare provided from the 2nd Data pull using the communities sorting as was considered to be more detailed and familiar to stakeholders and Miami Locals than neighborhoods, and gave us an initial result of 52 Categories Related to food driven by the ID predefined from Foursquare API documentation and 801 unique venues that are overlapped in some cities due to the proximity in some cases.

This is a great number of restaurants from were we could define Cluster areas to find out the most represented and concurred areas, in this case the analysis support these locations as proven Business location option despite the apparent competition, people interest, affluence of tourists and communities support the growth that once we have received feedback from stakeholders will be subject of further analysis.

Result of all this is 5 zones or Clusters containing largest number of potential new restaurant locations out of which we suggest 2 main options based on the results due to restaurants in the area, gastronomic influence but will have to be crossed with real state information, locations availability and budget.

Conclusion

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The previous discussion of course, does not imply that Cluster 1 & 2 are guaranteed as optimal locations for a new restaurant, the objective of this analysis is merely illustrative and it's recommended to be expanded to other metrics once there is more information about the desired communities and proposal details along with any additional variables from stakeholders.

The intention with this projects is provide information on candidate area of Miami-Dade there is a good indicative given the high number of restaurants in the clusters areas selected, that could reasons which would make them suitable for a new restaurant could eventually result in location which has not only no nearby competition but also other factors taken into account such as menus, price, reviews and other factors of interest that will drive the final decision along with all other relevant conditions met.