Choosing the Location for a New Whole Foods Market

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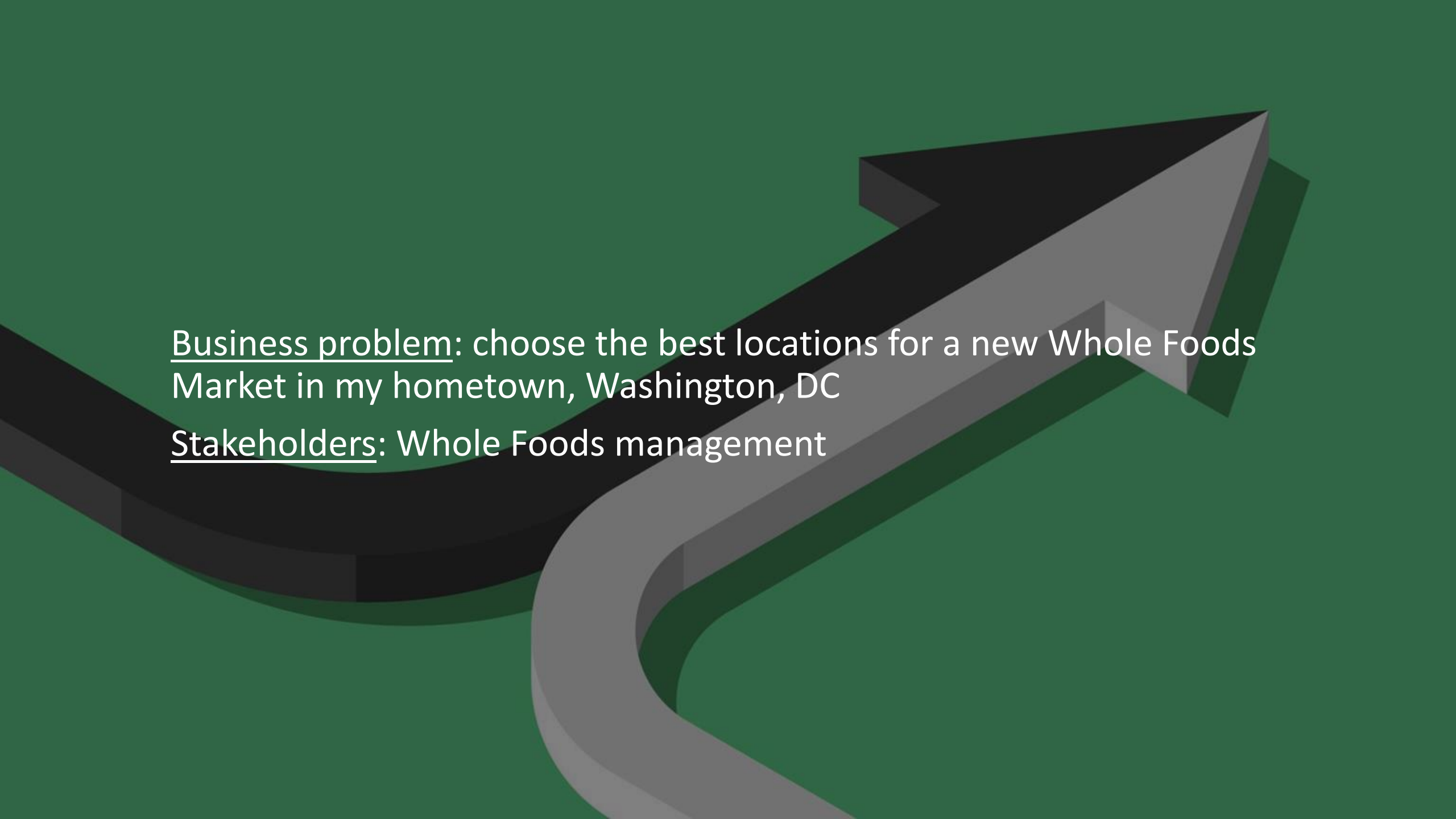
- Whole Foods is a supermarket chain with 500 locations in the US
- Whole Foods is owned and operated by Amazon
- Whole Foods attracts wealthy clients

Source

Photo source

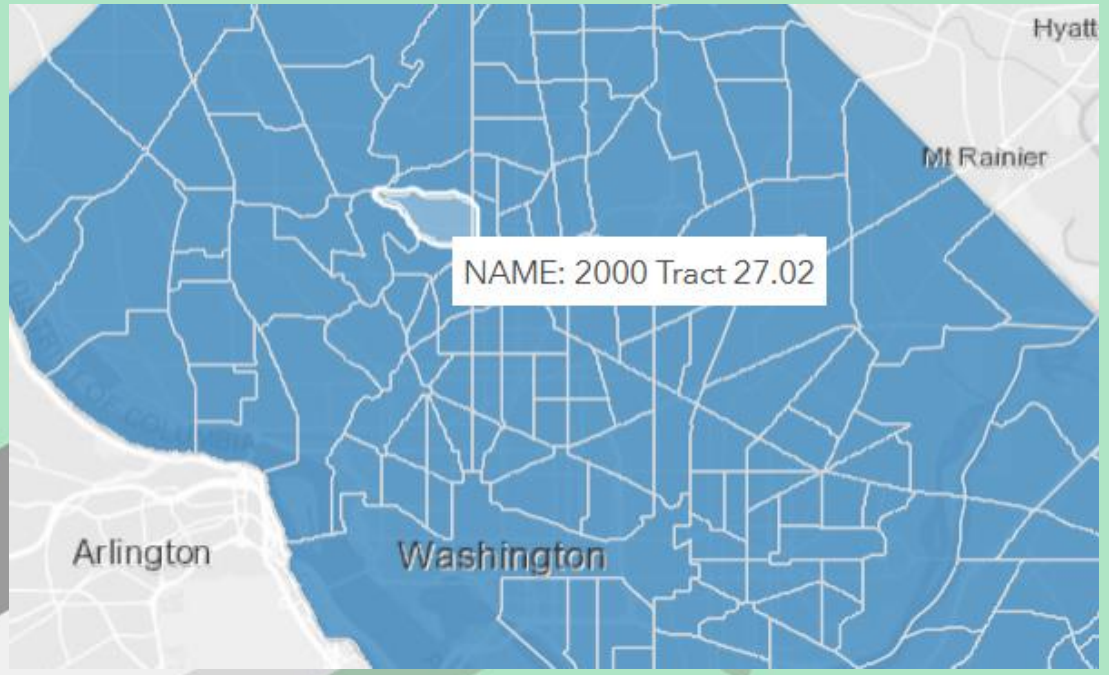


Business problem: choose the best locations for a new Whole Foods Market in my hometown, Washington, DC

Stakeholders: Whole Foods management

Census Data

- Data available: The DC Government makes income and census tract data available to the public
- Contain median income by census tract for the years 2005 and 2018

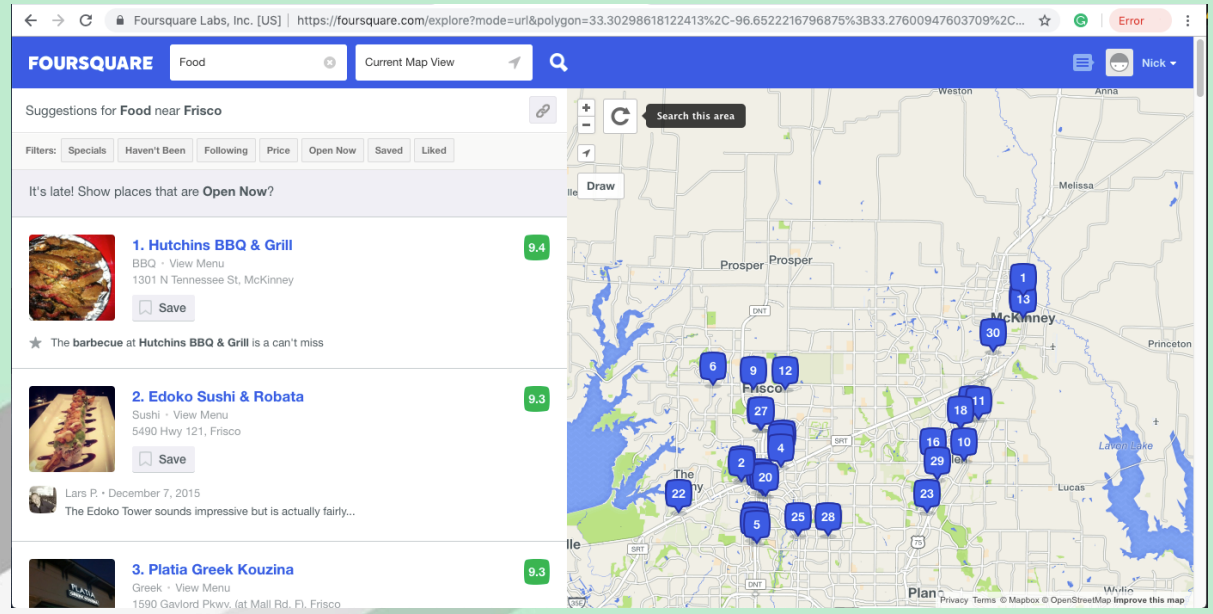


	A	B	C	D	E	F
1	OBJECTID_1	GIS_ID	FEDTRACTNO	TRACTNO	AREASQMI	POPDENSITY
2	1	Tract00_017	22.01	22.1	0.16027	21869.34548
3	2	Tract00_158	9.01	9.1	1.16481	6188.13369
4	3	Tract00_018	13.02	13.2	0.61848	10176.56189
5	4	Tract00_019	25.01	25.1	0.20982	11400.24783
6	5	Tract00_020	23.01	23.1	0.14918	20076.41775
7	6	Tract00_022	95.04	95.4	0.39379	8514.69057
8	7	Tract00_023	10.02	10.2	0.34368	10082.05307
9	8	Tract00_024	23.02	23.2	0.79006	1702.40235
10	9	Tract00_026	25.02	25.2	0.23339	23505.72004
11	10	Tract00_150	9.02	9.2	0.82807	2382.64881
12	11	Tract00_151	8.01	8.1	1.16949	5746.94953

FourSquare Venue Data

- Data available: FourSquare provides location data for a variety of venues
- Data include name, category, reviews, and other information
- FourSquare also has an API for programmatic queries

Photo source



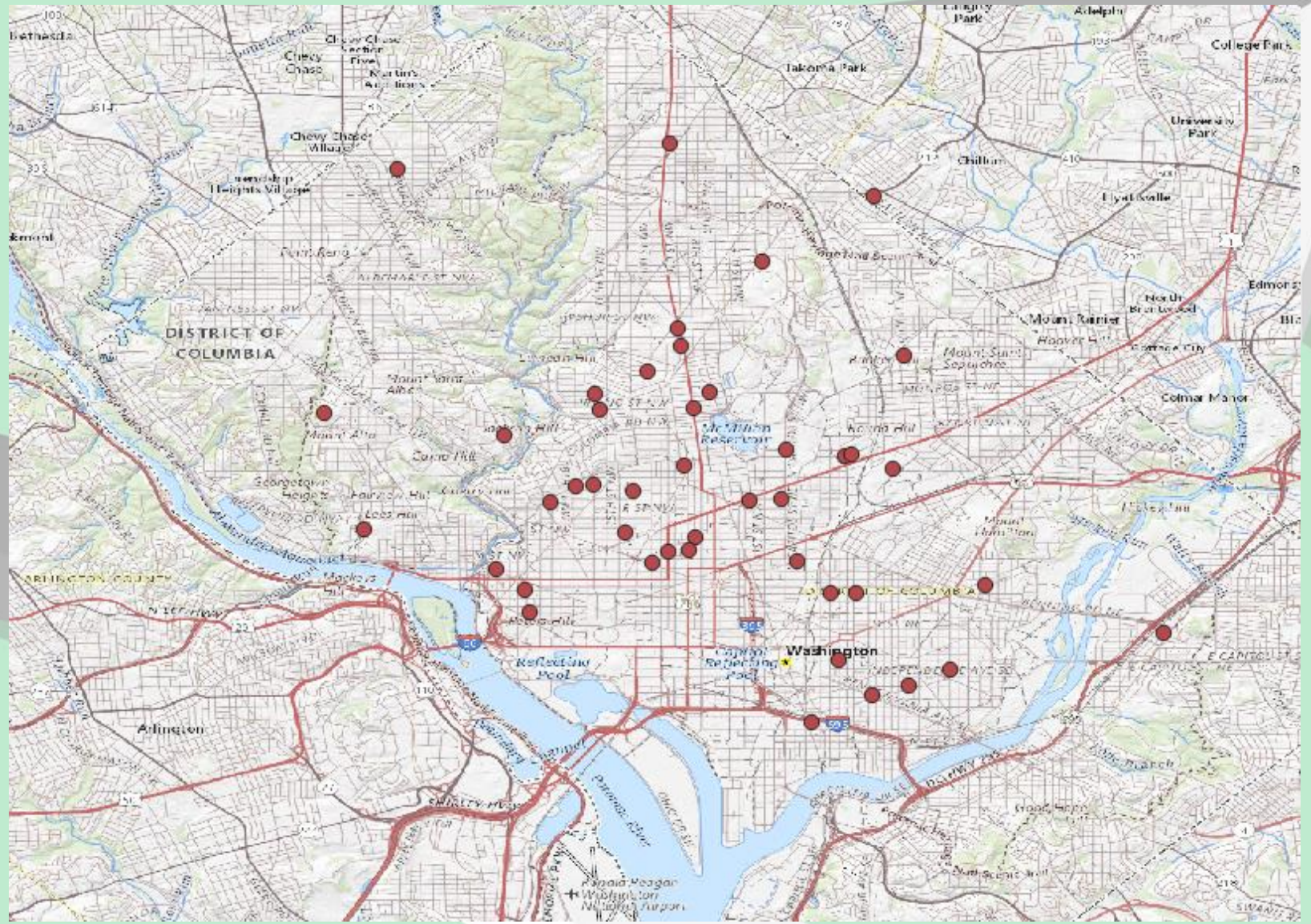

```
def getNearbyVenues(names, latitudes, longitudes, radius=500):

    venues_list=[]
    for name, lat, lng in zip(names, latitudes, longitudes):
        print(name)

        # create the API request URL
        url = 'https://api.foursquare.com/v2/venues/explore?&cl
            CLIENT_ID,
            CLIENT_SECRET,
            VERSION,
            lat,
            lng,
            radius,
            LIMIT)
```

Methodology

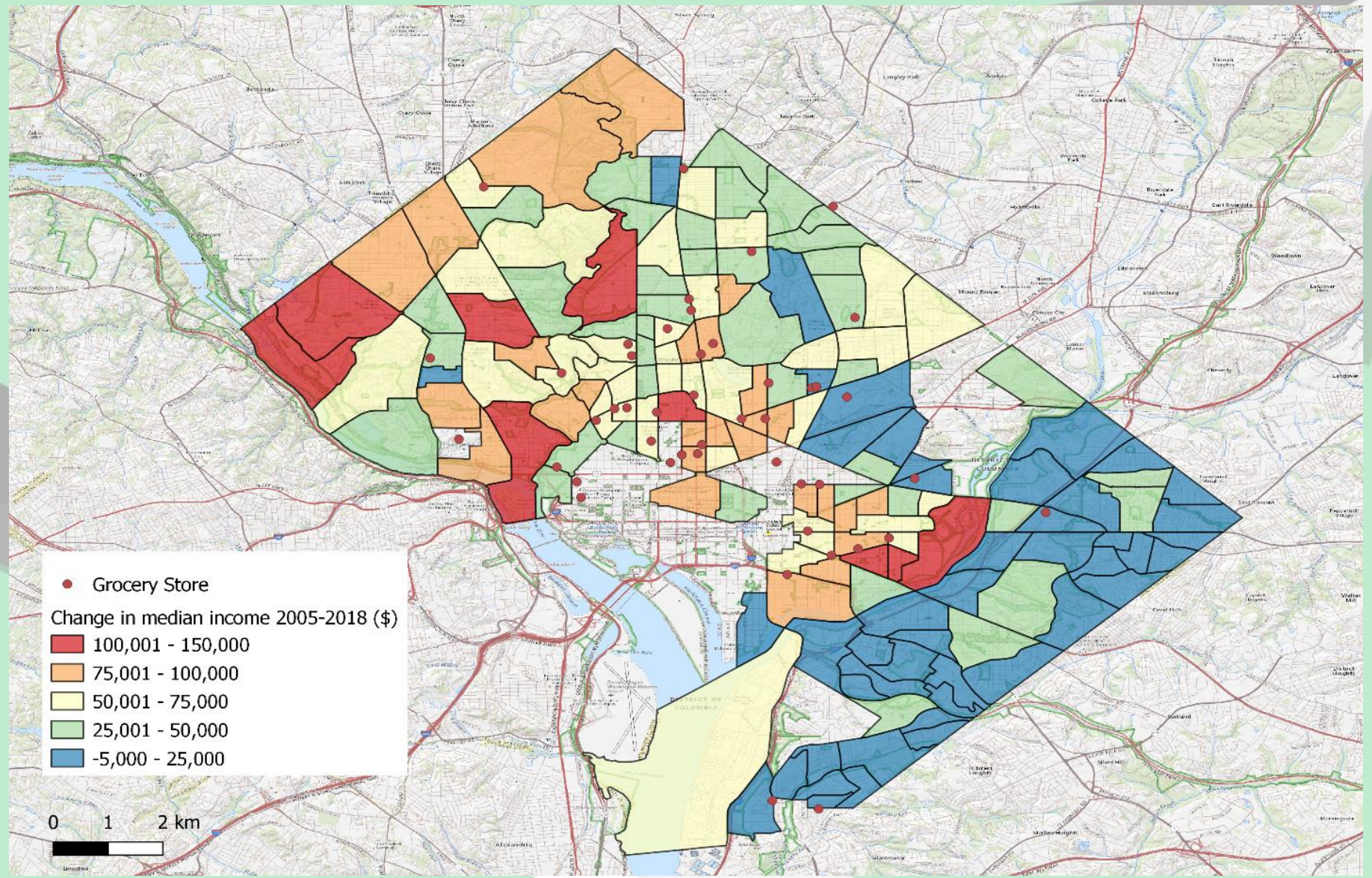
- Goal #1: Identify the census tracts with the largest gains in median income 2005-2018
- Goal #2: Find all grocery stores in DC; discover census tracts without existing stores
- Choose best candidate tracts with income growth and no nearby stores
- These locations would have a wealthy customer base and no current grocery competitors
- Use Watson Studio for Python Pandas data analysis and FourSquare API queries

Photo source

Grocery Store Locations in Washington, DC

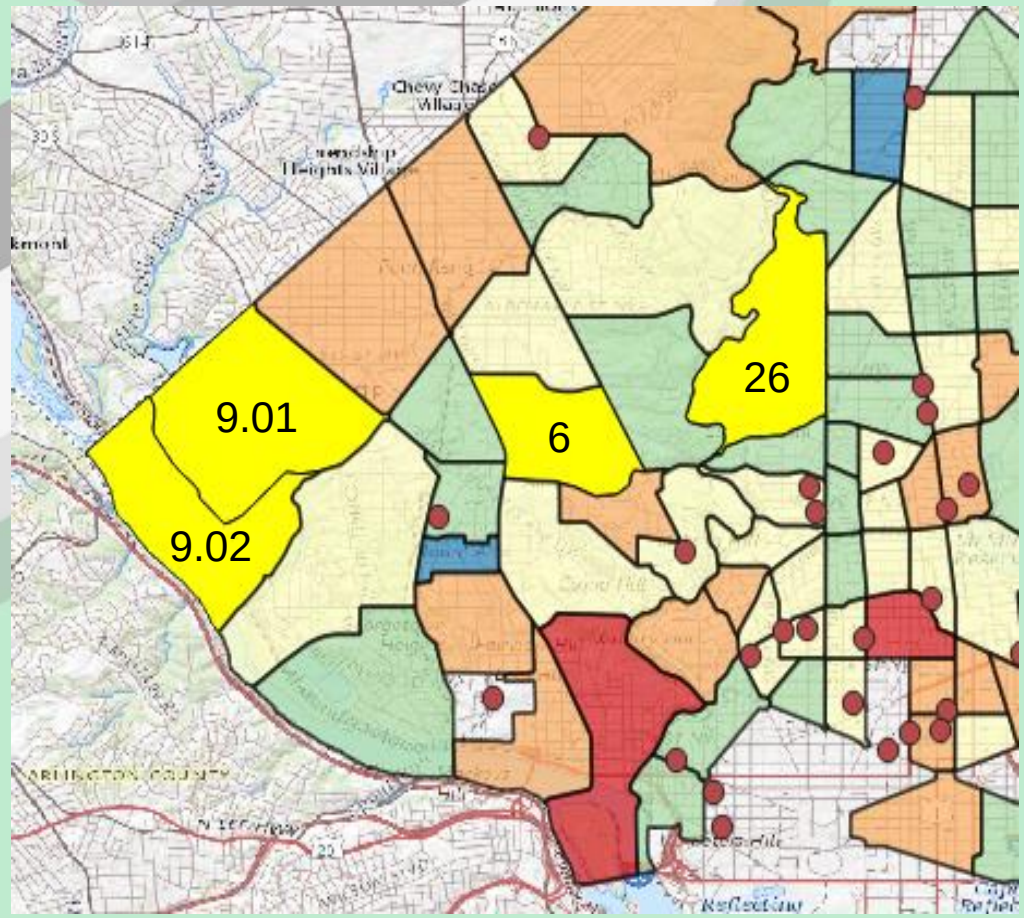


Change in Median Income by Census Tract



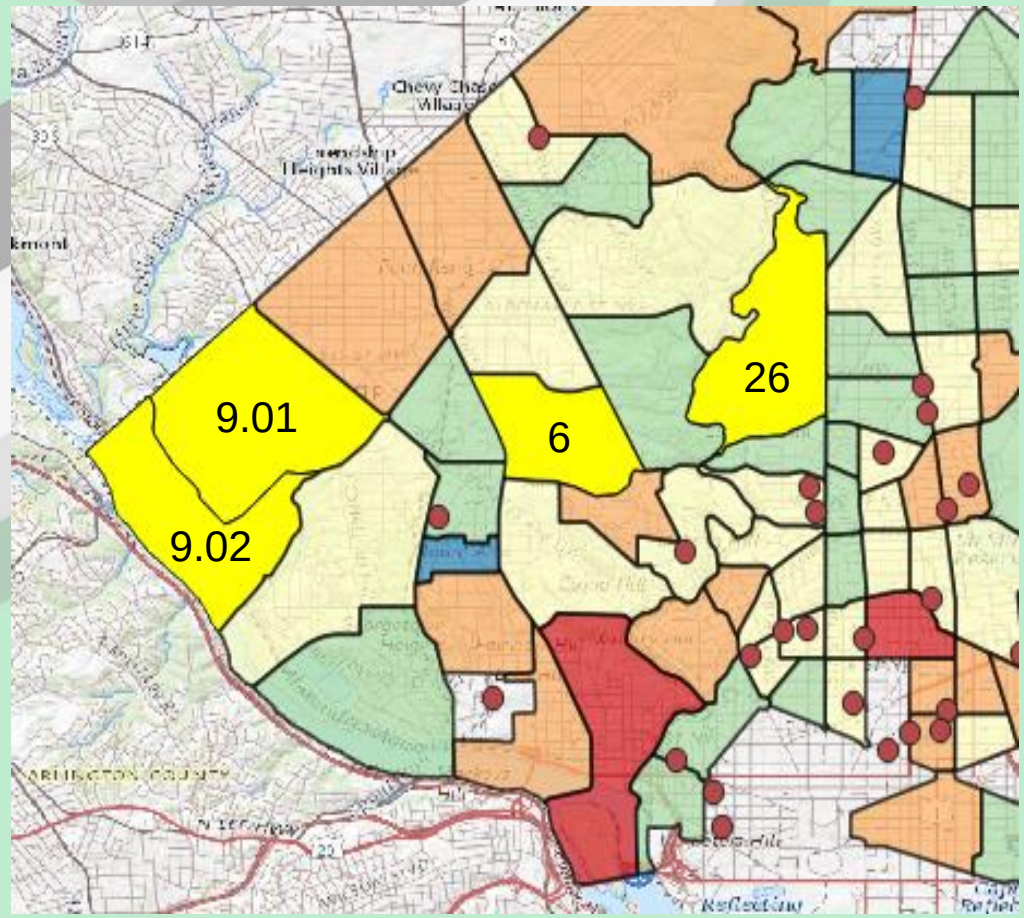
Results

- Nine census tracts experienced growth between $100,000 and $150,000
- Of those, only tracts 6, 9.01, 9.02, and 26 (in yellow) do not have a nearby store
- **These are the best candidate areas for a new Whole Foods Market**



Conclusion

- These tracts provide a wealthy customer base and no existing competitors
- Additional analysis possible to narrow down to street level locations
- Other potential useful data: access to transportation, traffic patterns, zoning restrictions, price/availability of real estate




Thank you!