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# YAPP

## (Yet Another Pizza Place)

Applied Data Science Capstone by  
IBM/Coursera

The Battle of the Neighborhoods (Week 2)

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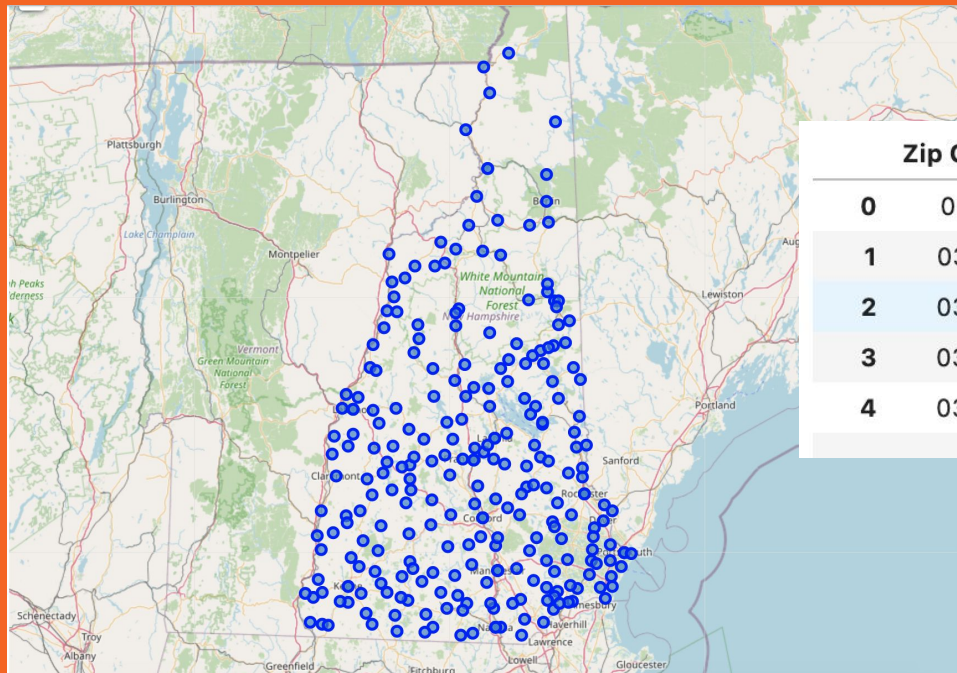
# Finding the location for my new pizza place?

Having visibility into the competitive landscape by:

- Considering the population
- Number of similar businesses surrounding a targeted area
- Know if these similar restaurants are part of the top 10 recommended restaurants

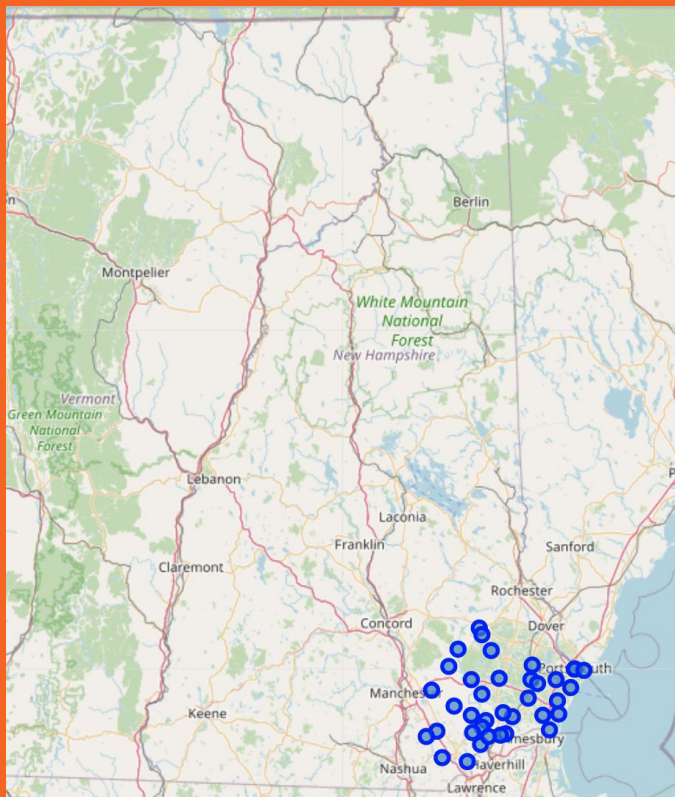


# The Region & Locations



	Zip Code	City	County	Latitude	Longitude
0	03031	Amherst	Hillsborough	42.864287	-71.625248
1	03032	Auburn	Rockingham	43.004529	-71.348398
2	03033	Brookline	Hillsborough	42.734810	-71.658127
3	03034	Candia	Rockingham	43.077916	-71.277237
4	03036	Chester	Rockingham	42.956753	-71.257285

# Rockingham County



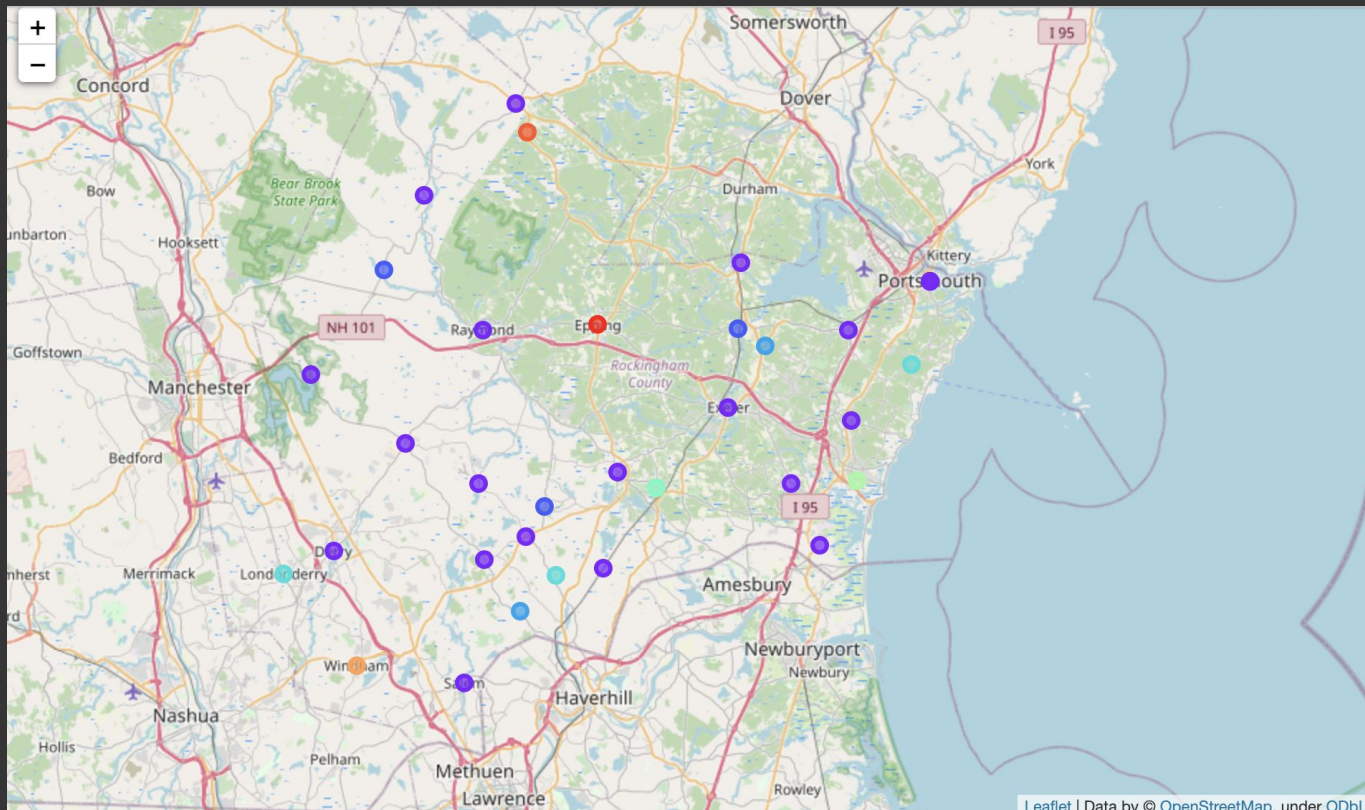
	Zip Code	City	County	Latitude	Longitude
0	03032	Auburn	Rockingham	43.004529	-71.348398
1	03034	Candia	Rockingham	43.077916	-71.277237
2	03036	Chester	Rockingham	42.956753	-71.257285
3	03037	Deerfield	Rockingham	43.130171	-71.238819
4	03038	Derry	Rockingham	42.880868	-71.326449
6	03041	East Derry	Rockingham	55.040548	-71.68150
7	03042	Epping	Rockingham	43.039446	-71.073025
8	03044	Fremont	Rockingham	42.990919	-71.142561
9	03053	Londonderry	Rockingham	42.865087	-71.373953
10	03073	North Salem	Rockingham	45.144395	-63.469391
11	03077	Raymond	Rockingham	43.036196	-71.183395
12	03079	Salem	Rockingham	42.788423	-71.200893
13	03087	Windham	Rockingham	42.800644	-71.304229
14	03261	Northwood	Rockingham	43.194664	-71.151581
15	03290	Nottingham	Rockingham	43.125798	-71.101915

# Analyzing the Cities and Towns

	Zip Code	City	County	Latitude	Longitude	Cluster Labels	1st Most Common Venue	2nd Most Common Venue	3rd Most Common Venue	4th Most Common Venue	5th Most Common Venue	6th Most Common Venue	7th Most Common Venue	8th Most Common Venue	9th Most Common Venue	10th Most Common Venue
0	03032	Auburn	Rockingham	43.004529	-71.348398	1.0	Pizza Place	Post Office	Construction & Landscaping	Supermarket	Deli / Bodega	Cheese Shop	Chinese Restaurant	Coffee Shop	Comic Shop	Convenience Store
1	03034	Candia	Rockingham	43.077916	-71.277237	1.0	Construction & Landscaping	Deli / Bodega	Wine Shop	Candy Store	Chinese Restaurant	Coffee Shop	Comic Shop	Convenience Store	Dance Studio	Diner
2	03036	Chester	Rockingham	42.956753	-71.257285	1.0	Diner	Food & Drink Shop	Ice Cream Shop	Wine Shop	Chinese Restaurant	Coffee Shop	Comic Shop	Construction & Landscaping	Convenience Store	Dance Studio
3	03037	Deerfield	Rockingham	43.130171	-71.238819	1.0	Pizza Place	Post Office	Restaurant	Bookstore	Dance Studio	Cheese Shop	Chinese Restaurant	Coffee Shop	Comic Shop	Construction & Landscaping
4	03038	Derry	Rockingham	42.880868	-71.326449	1.0	Pharmacy	Café	Italian Restaurant	Pizza Place	Video Store	Convenience Store	Salon / Barbershop	Diner	Bar	Park



# Mapping Clusters



# Examining the clusters:

**Bad candidates** = Towns and cities where any of their top 10 recommended venues are pizza places

	City
0	Auburn
3	Deerfield
4	Derry
12	Salem
23	East Hampstead
26	Greenland
27	Hampstead
31	Kingston
36	Newton Junction
41	Sandown

# Examining the clusters:

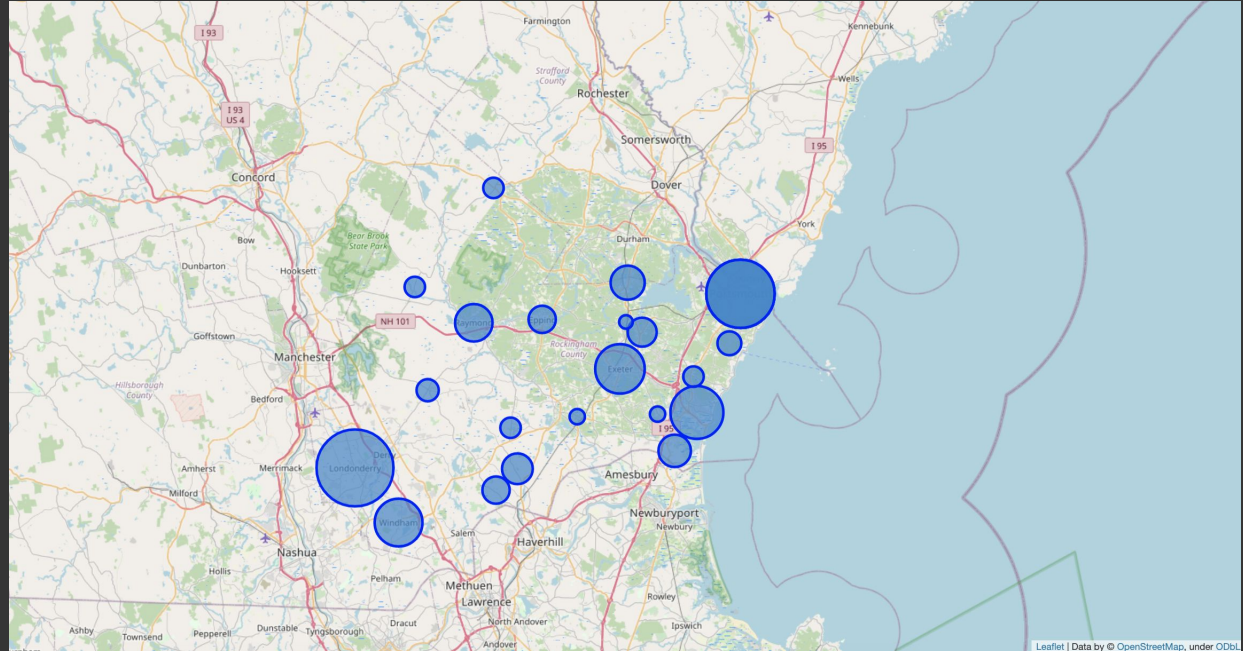
**Good candidates** = Towns and cities where none of their top 10 recommended venues are pizza places

Zip Code	City	Latitude	Longitude
03053	Londonderry	42.865087	-71.373953
03801	Portsmouth	43.070222	-70.754862
03802	Portsmouth	43.070222	-70.754862
03804	Portsmouth	43.070222	-70.754862
03842	Hampton	42.930438	-70.824896
03833	Exeter	42.981477	-70.947834
03087	Windham	42.800644	-71.304229
03077	Raymond	43.036196	-71.183395
03857	Newmarket	43.082931	-70.935974
03874	Seabrook	42.884663	-70.860196
03865	Plaistow	42.864094	-71.113350
03885	Stratham	43.024413	-70.912281
03811	Atkinson	42.838422	-71.147004
03042	Epping	43.039446	-71.073025
03870	Rye	43.012019	-70.771943
03036	Chester	42.956753	-71.257285
03819	Danville	42.912588	-71.124504
03862	North Hampton	42.972589	-70.829776
03261	Northwood	43.194664	-71.151581
03034	Candia	43.077916	-71.277237
03827	East Kingston	42.925644	-71.016724
03844	Hampton Falls	42.928236	-70.888072
03856	Newfields	43.037032	-70.938391



# After adding the population we'll know better places to invest

Zip Code	City	Latitude	Longitude	Population
03053	Londonderry	42.865087	-71.373953	24129
03801	Portsmouth	43.070222	-70.754862	20779
03802	Portsmouth	43.070222	-70.754862	20779
03804	Portsmouth	43.070222	-70.754862	20779
03842	Hampton	42.930438	-70.824896	15430
03833	Exeter	42.981477	-70.947834	14306
03087	Windham	42.800644	-71.304229	13592
03077	Raymond	43.036196	-71.183395	10138
03857	Newmarket	43.082931	-70.935974	8936
03874	Seabrook	42.884663	-70.860196	8693
03865	Plaistow	42.864094	-71.113350	7609
03885	Stratham	43.024413	-70.912281	7255
03811	Atkinson	42.838422	-71.147004	6751
03042	Epping	43.039446	-71.073025	6411
03870	Rye	43.012019	-70.771943	5298
03036	Chester	42.956753	-71.257285	4768
03819	Danville	42.912588	-71.124504	4387
03862	North Hampton	42.972589	-70.829776	4301
03261	Northwood	43.194664	-71.151581	4241
03034	Candia	43.077916	-71.277237	3909
03827	East Kingston	42.925644	-71.016724	2357
03844	Hampton Falls	42.928236	-70.888072	2236
03856	Newfields	43.037032	-70.938391	1680



# Conclusion

This study offers:

- Finding focus on areas and best locations for business opportunities
- Save time and money on market research
- Knowledge of locations where there is less competition
- Possibility to extend to other types of businesses

