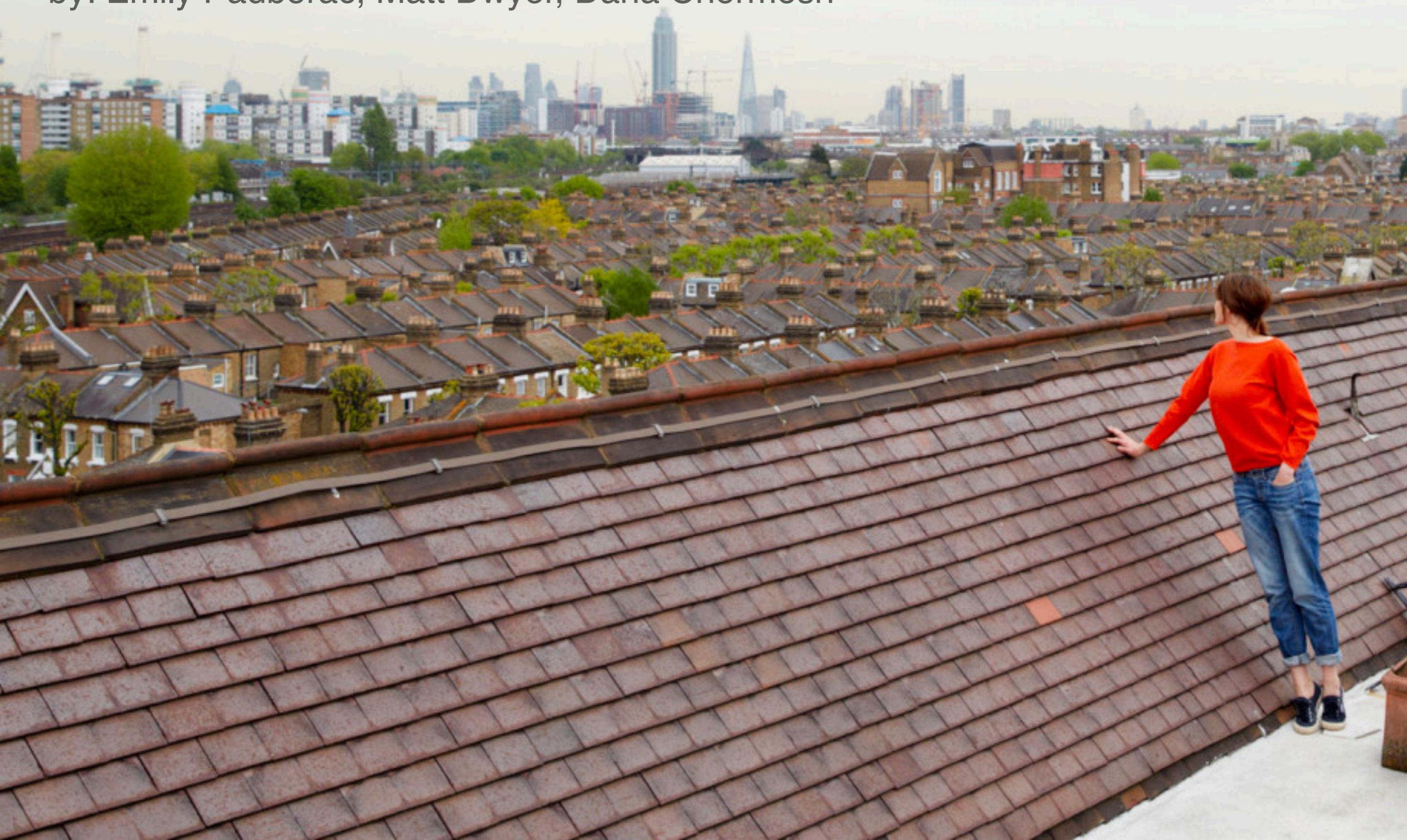


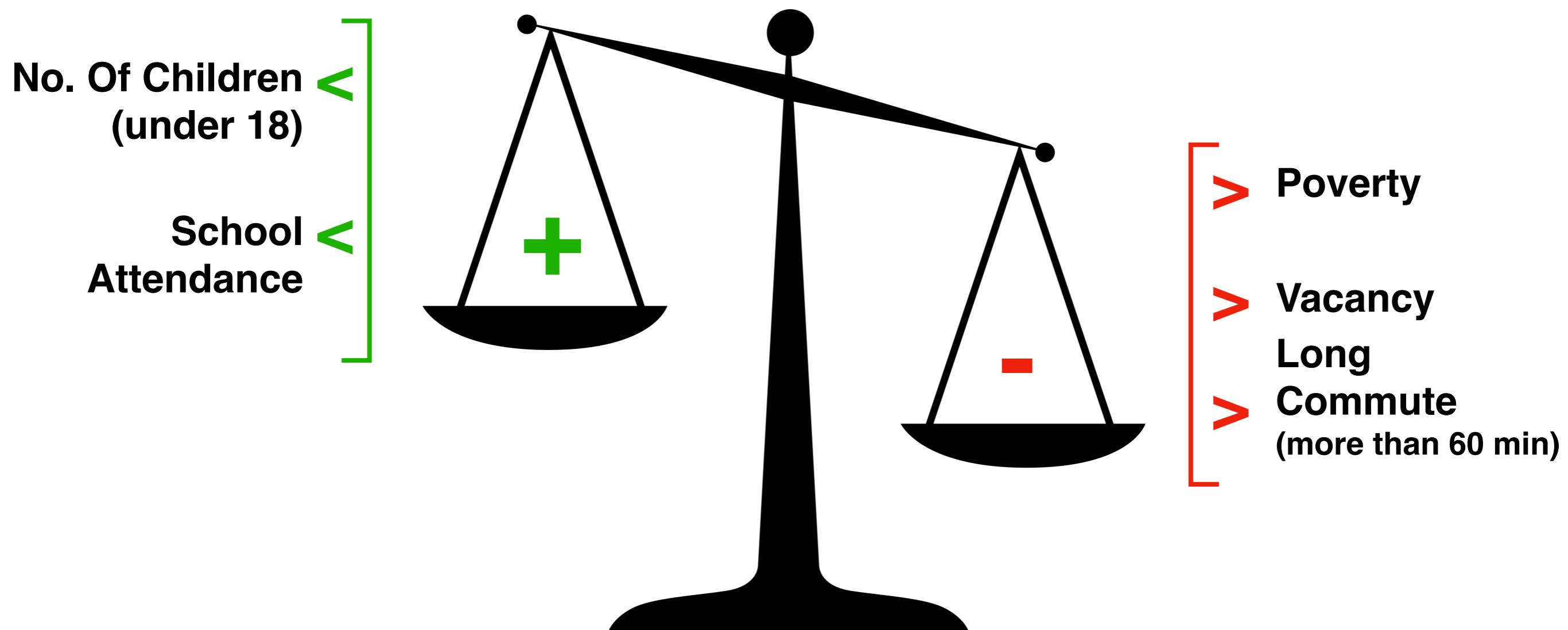
Analyzing urban (un)Livability

Urban Spatial Analytics, Project#2

by: Emily Padborac, Matt Dwyer, Dana Chermesh



defining urban (un)Livability



** All variables are normalized

defining urban (un)Livability



$$0.3 * \text{No. Of Children} \quad (\text{under } 18) + 0.7 * \text{School} \quad \text{Attendance} = 1$$

$$- 0.5 * \text{Poverty} - 0.3 * \text{Vacancy} - 0.2 * \text{Long Commute} = -1$$

(more than 60 min)

** All variables are normalized

defining urban (un)Livability



-1 < Livability Score < 1



$$0.3 * \text{No. Of Children} \text{ (under 18)} + 0.7 * \text{School Attendance} = 1$$

$$- 0.5 * \text{Poverty} - 0.3 * \text{Vacancy} - 0.2 * \text{Long Commute} = -1$$

(more than 60 min)

** All variables are normalized



Search - Use the options on the left (topics, geographies, ...) to narrow your search results

Your Selections

'Your Selections' is empty

[load search](#) | [save search](#)

Search using the options below:

Topics
(age, income, year, dataset, ...)

Geographies
(states, counties, places, ...)

Race and Ethnic Groups
(race, ancestry, tribe)

Industry Codes
(NAICS industry, ...)

EEO Occupation Codes
(executives, analysts, ...)

To search for tables and other files in American FactFinder:

1

Enter search terms and an optional geography and click **GO**

topic or table name state, county or place (optional)

GO 

topics race/ancestry industries occupations

-- or --

Select from **Topics, Race and Ethnic Groups, Industry Codes, EEO Occupation Codes.**

- these are added to 'Your Selections'
- the Search Results are updated

2

Next, select **Geographies** (states, counties, cities, towns, etc.)

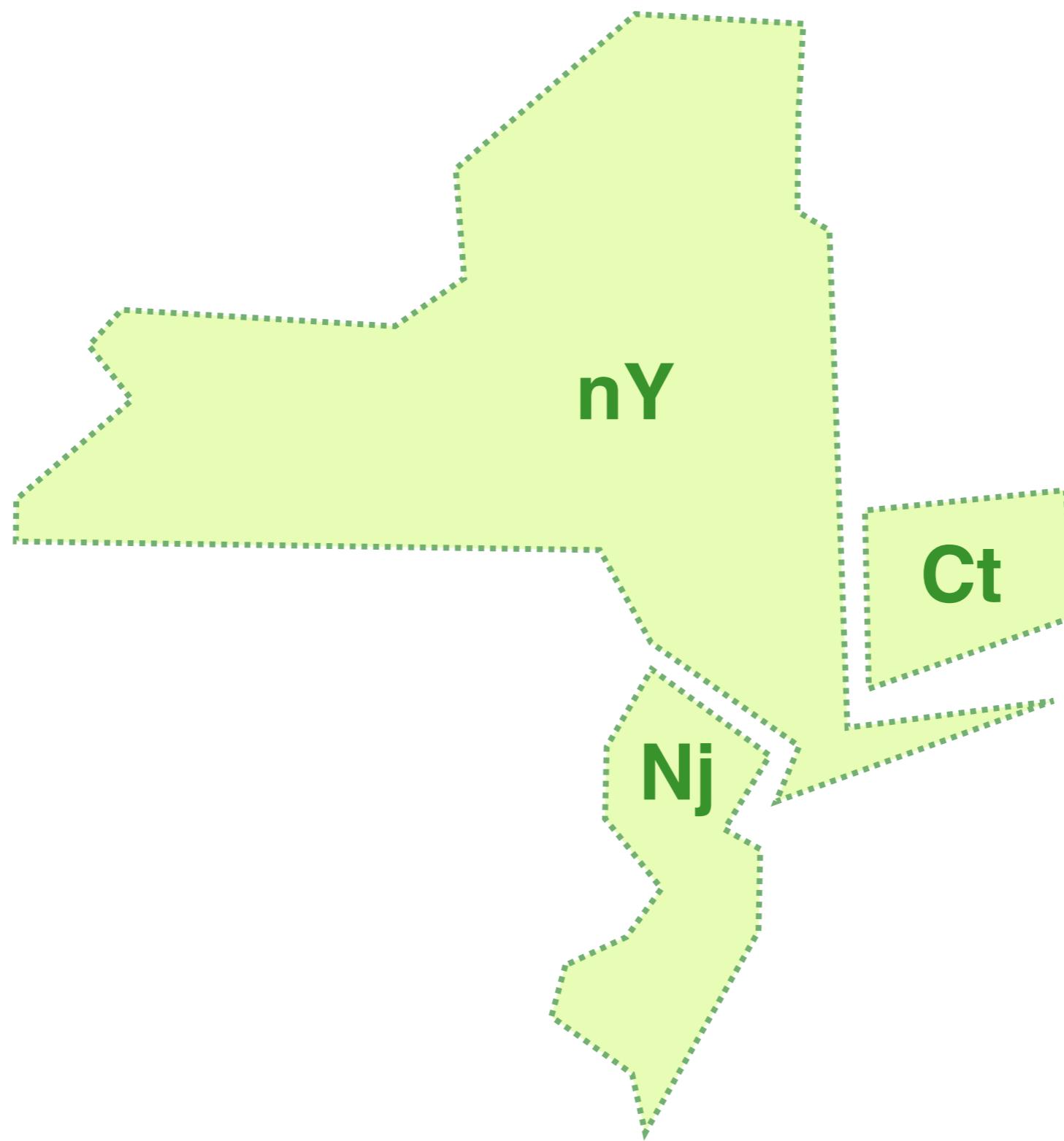
- these are added to 'Your Selections'
- the Search Results are updated

3

Select one or more Search Results and click **View**

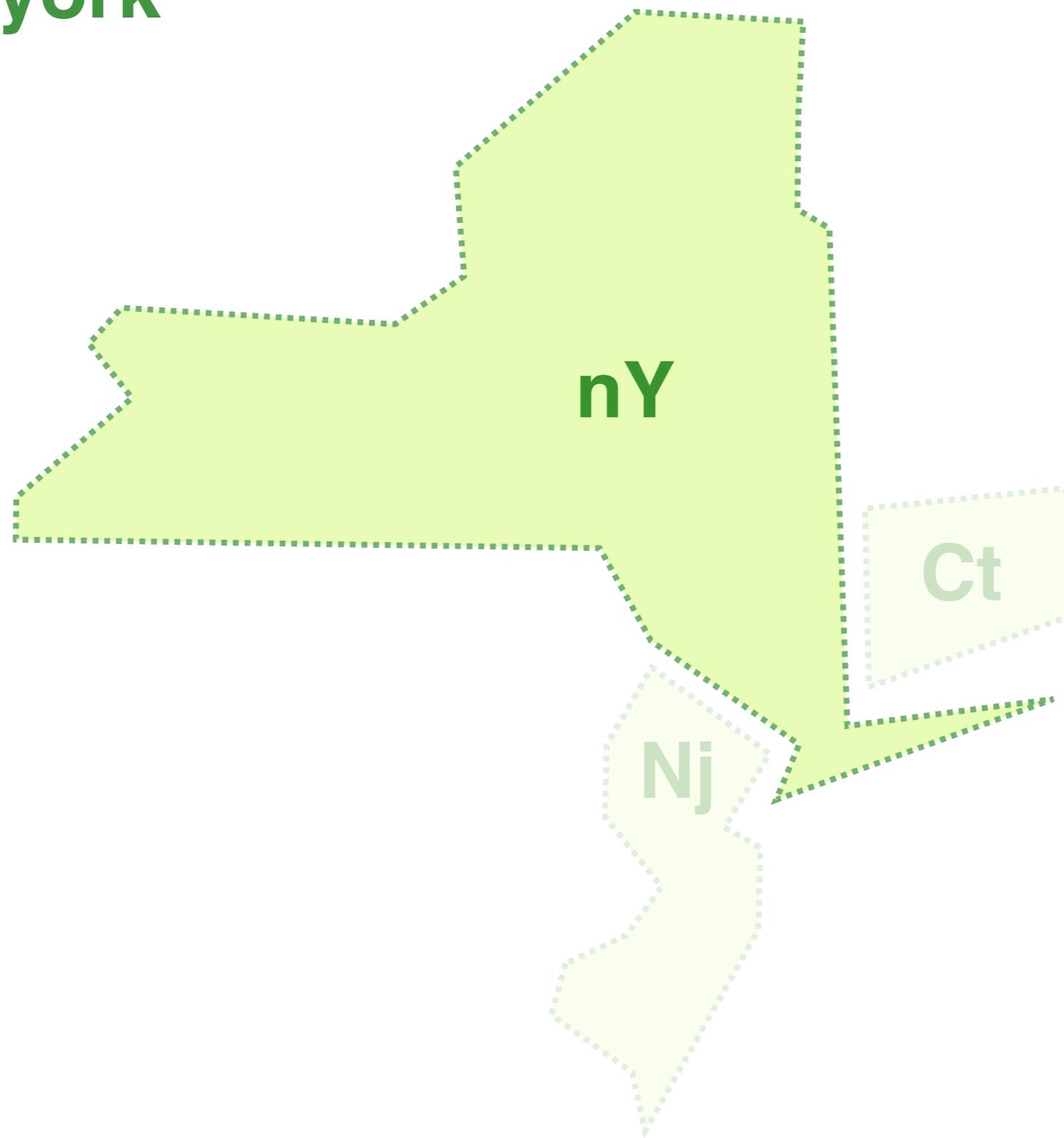
***obtaining the Data
American community survey**

Analyzing urban (un)Livability



Analyzing urban (un)Livability

① New york



New York Livability Scores

Legend

County Subdivisions

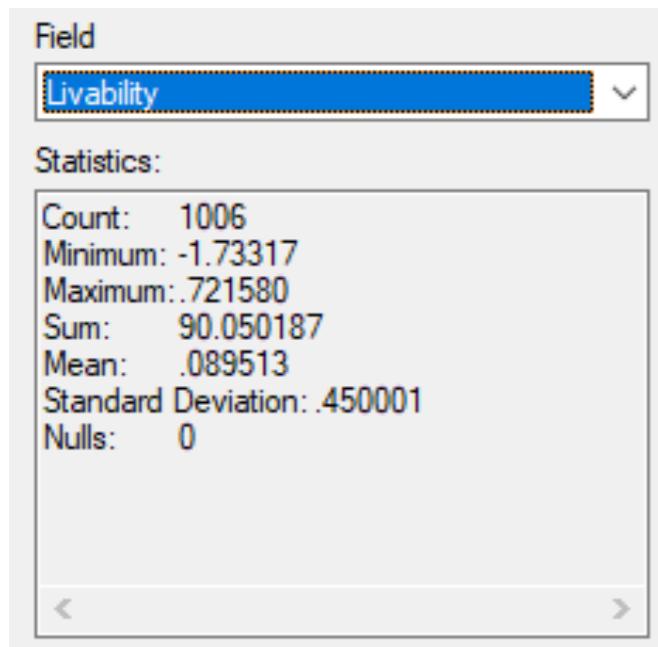
Livability Scores

- 1.73 - -.77
- .76 - -.28
- .27 - .09
- .10 - .38
- .39 - .72



Spatial Autocorrelation Report

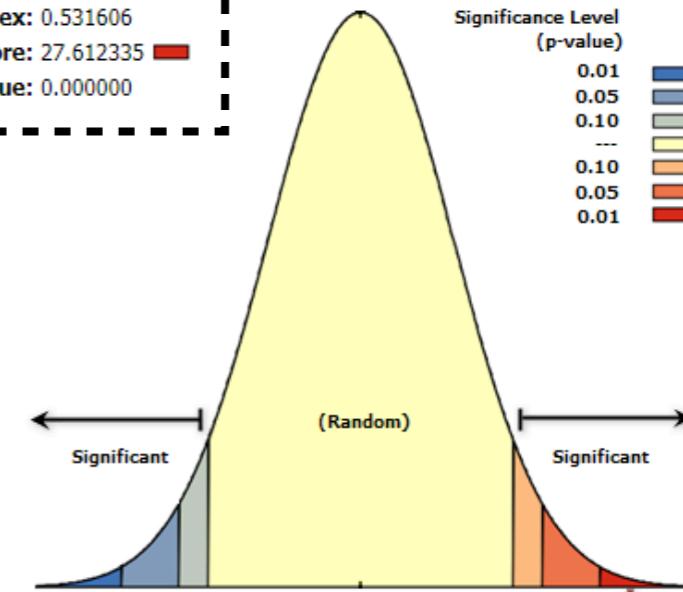
Moran's Index: 0.53
Z-score: **27.61**
P-value: 0.00



** Clustered ** Spatial Autocorrelation Report

Moran's Index: 0.531606
z-score: 27.612335
p-value: 0.000000

Significance Level (p-value)	Critical Value (z-score)
0.01	< -2.58
0.05	-2.58 -- -1.96
0.10	-1.96 -- -1.65
---	-1.65 - 1.65
0.10	1.65 - 1.96
0.05	1.96 - 2.58
0.01	> 2.58



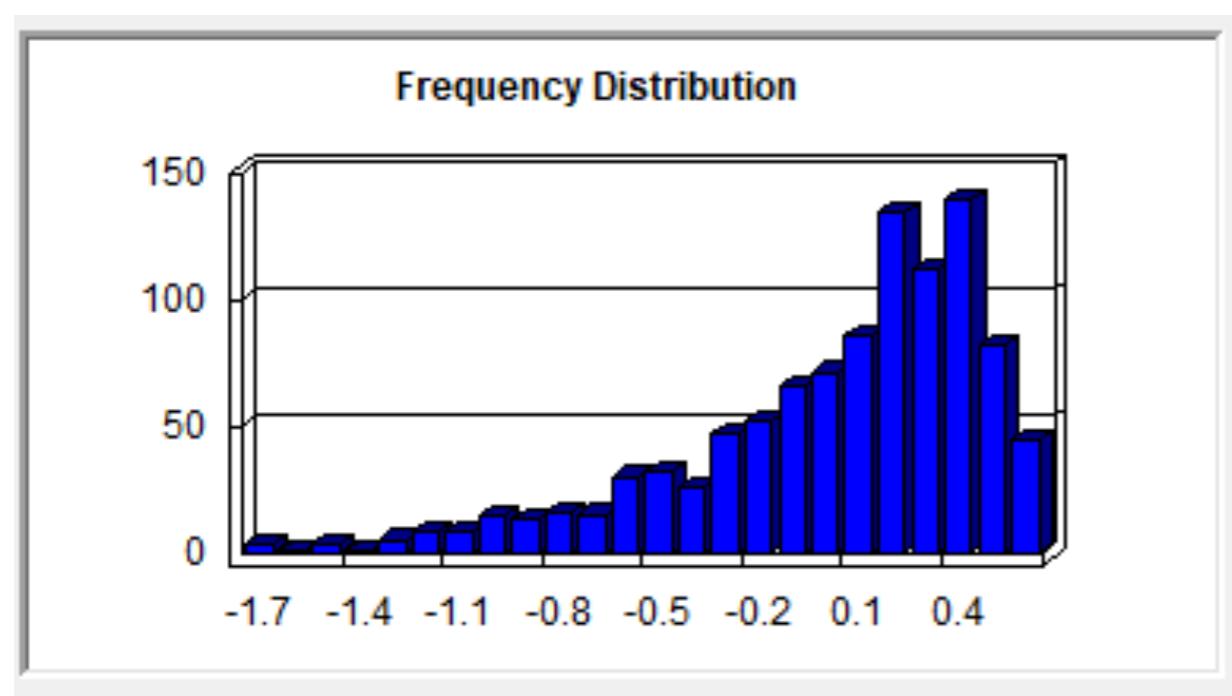
Given the z-score of 27.6123352113, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Global Moran's I Summary

Moran's Index:	0.531606
Expected Index:	-0.000995
Variance:	0.000372
z-score:	27.612335
p-value:	0.000000

Dataset Information

Input Feature Class:	County Subdivisions
Input Field:	LIVABILITY
Conceptualization:	CONTIGUITY_EDGES_ONLY
Distance Method:	EUCLIDEAN
Row Standardization:	False
Distance Threshold:	None
Weights Matrix File:	None
Selection Set:	False

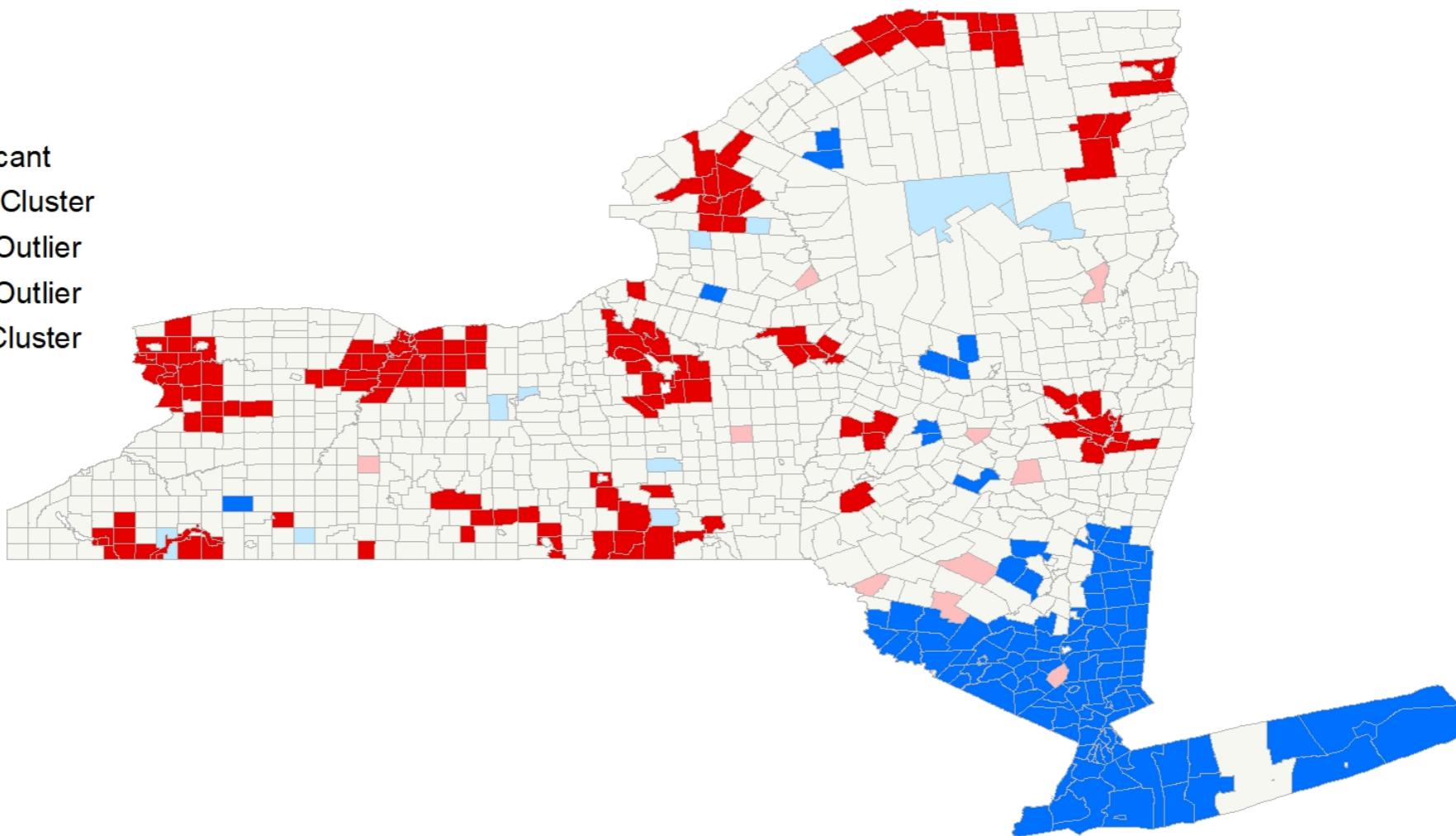


** Frequency Distribution

New York Livability Clustering

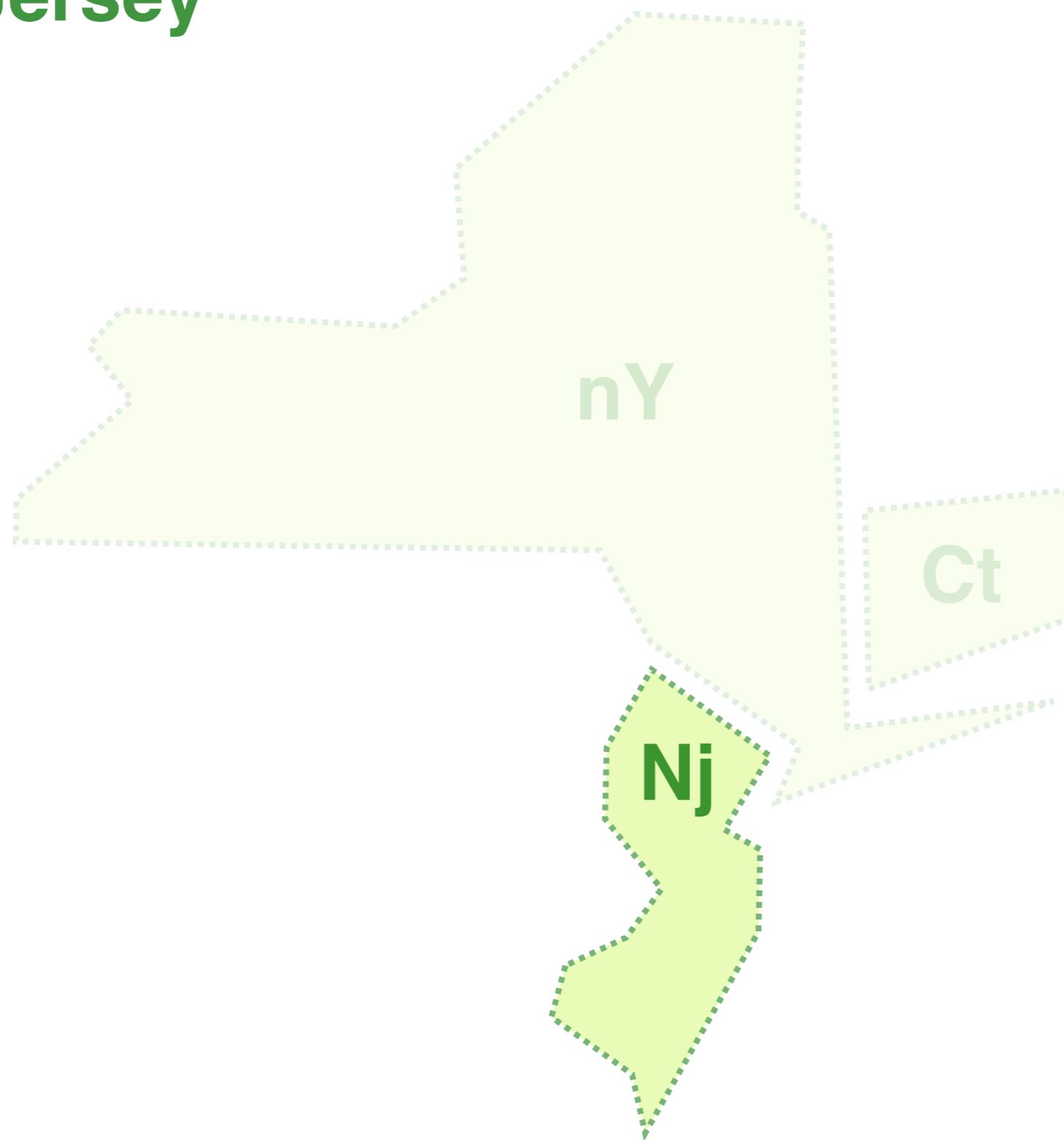
Legend

- Not Significant
- High-High Cluster
- High-Low Outlier
- Low-High Outlier
- Low-Low Cluster



Analyzing urban (un)Livability

② New Jersey



New Jersey Livability Scores

Legend

County Subdivision

Livability Scores

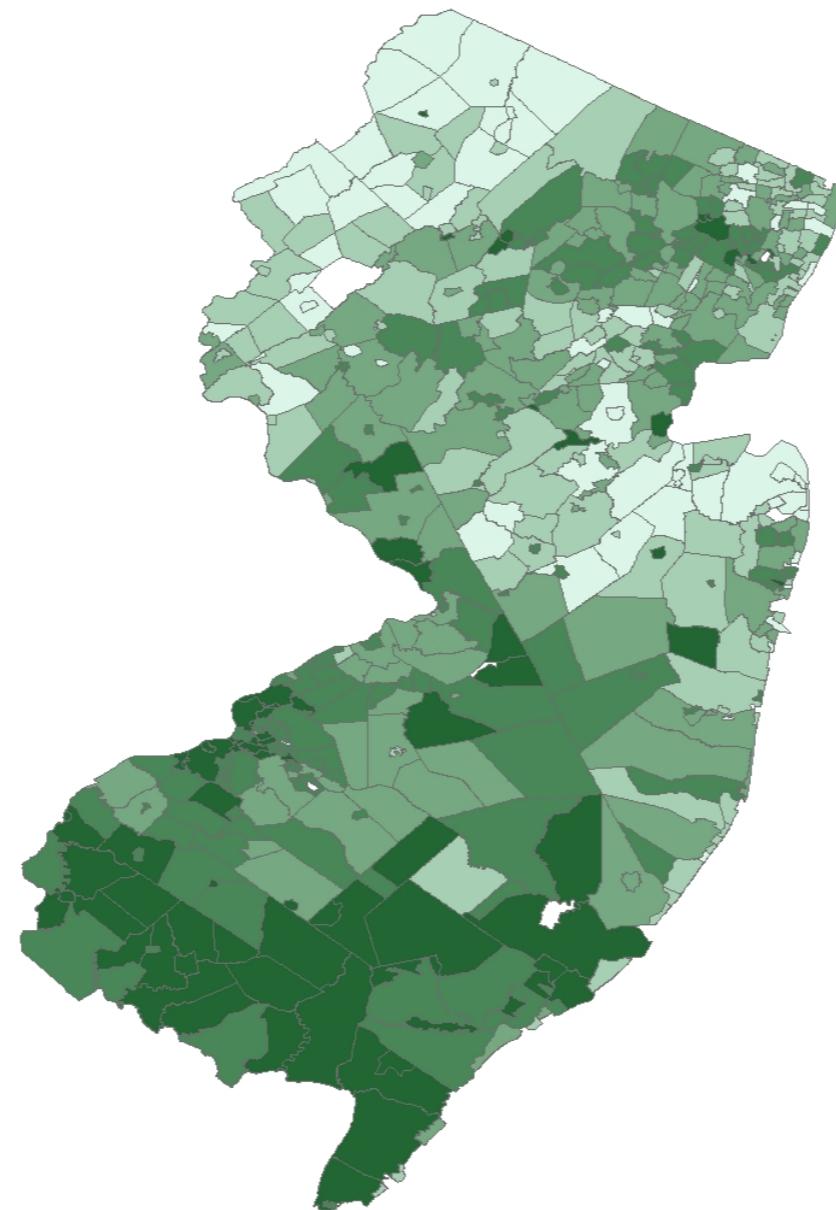
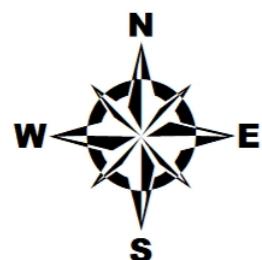
 -2.46 - -1.48

 -1.47 - -1.01

 -1.00 - -.66

 -.65 - -.33

 -.32 - .49



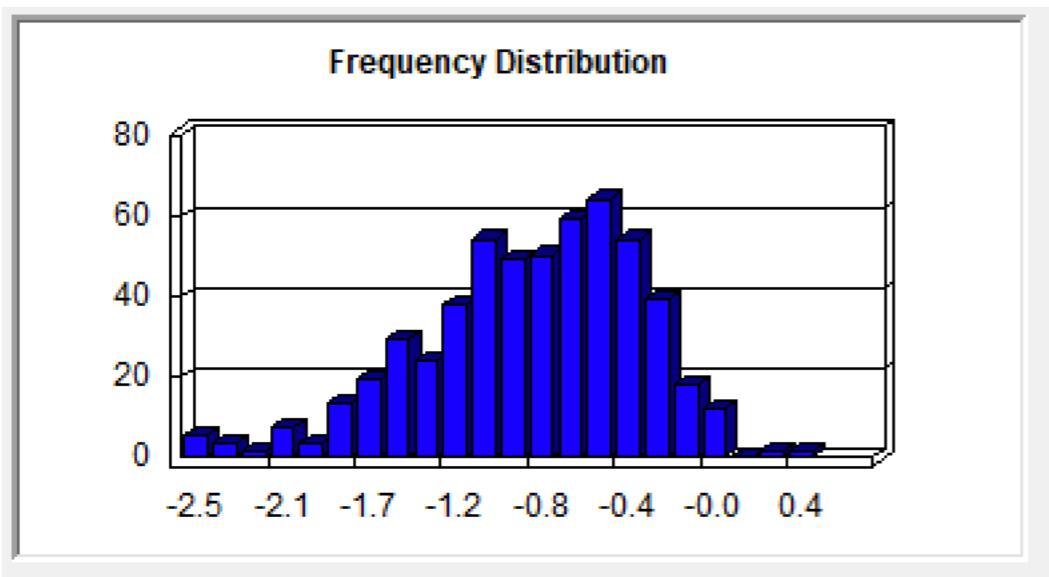
Spatial Autocorrelation Report

Moran's Index: 0.53
Z-score: **19.63**
P-value: 0.00

Field
Livability

Statistics:

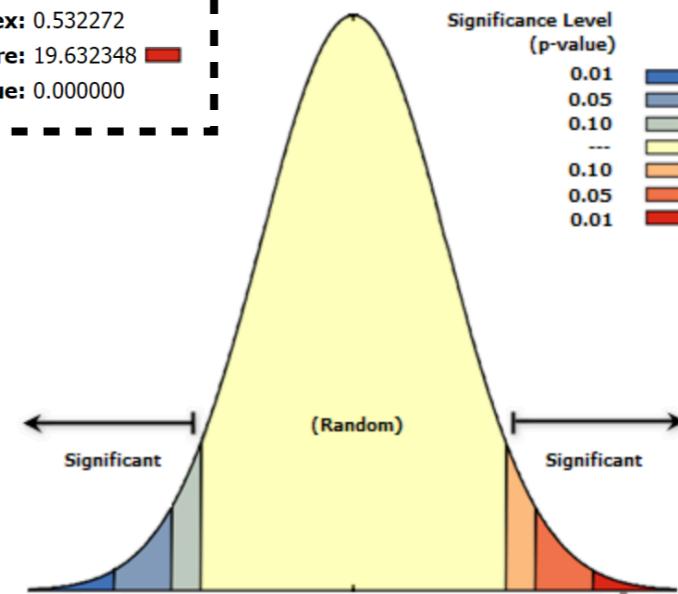
Count:	543
Minimum:	-2.459514
Maximum:	.487542
Sum:	-453.443331
Mean:	-.835071
Standard Deviation:	.492539
Nulls:	22



** Clustered ** Spatial Autocorrelation Report

Moran's Index: 0.532272
z-score: 19.632348
p-value: 0.000000

Critical Value (z-score)
< -2.58
-2.58 - -1.96
-1.96 - -1.65
-1.65 - 1.65
0.10
1.65 - 1.96
1.96 - 2.58
> 2.58



Given the z-score of 19.6323478104, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Global Moran's I Summary

Moran's Index:	0.532272
Expected Index:	-0.001845
Variance:	0.000740
z-score:	19.632348
p-value:	0.000000

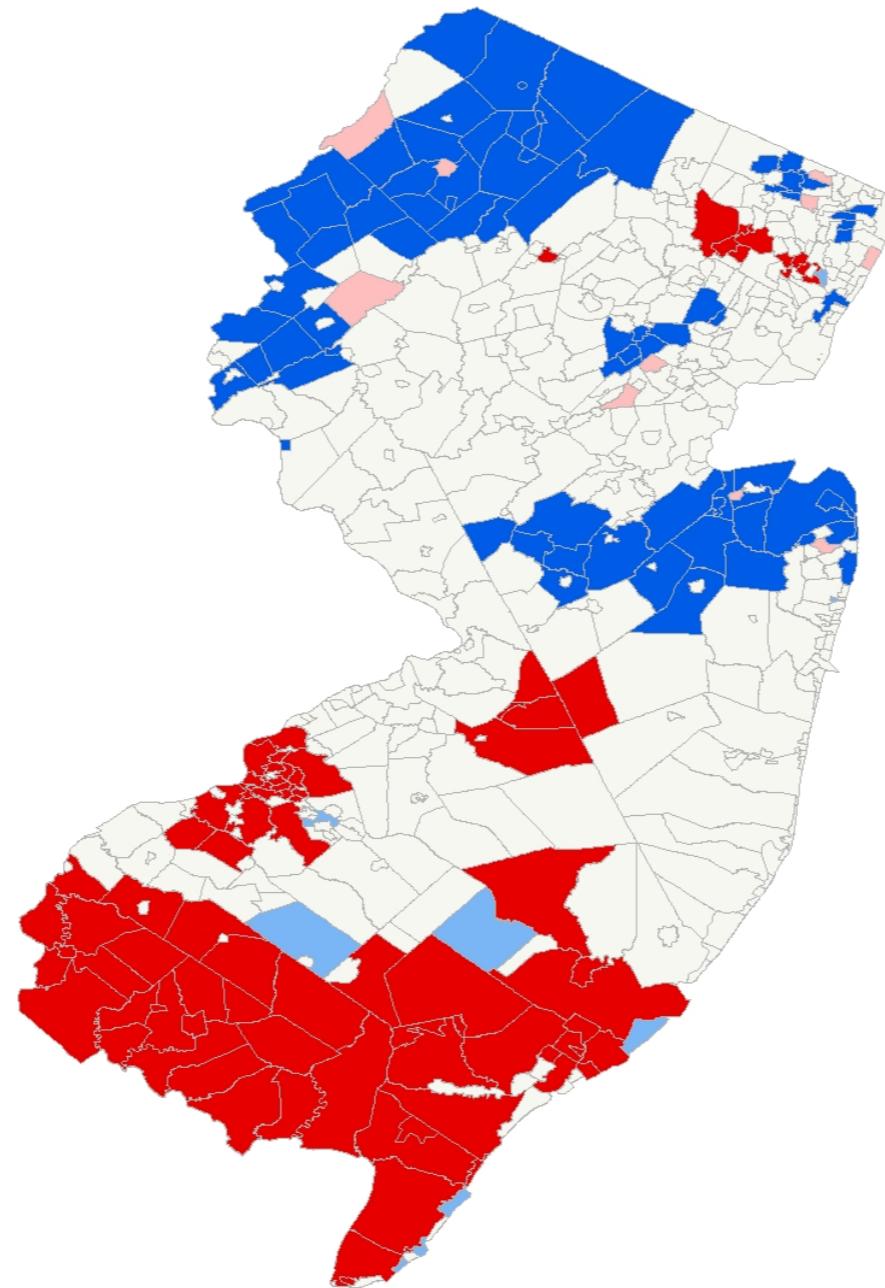
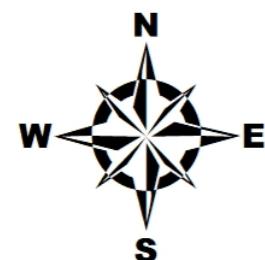
Dataset Information

Input Feature Class:	County Subdivision
Input Field:	ACS_2015_5YR_COUSUB_34_NEW_JERSEY.LIVABILITY_1
Conceptualization:	CONTIGUITY_EDGES_ONLY
Distance Method:	EUCLIDEAN
Row Standardization:	False
Distance Threshold:	None
Weights Matrix File:	None
Selection Set:	False

New Jersey Livability Clustering

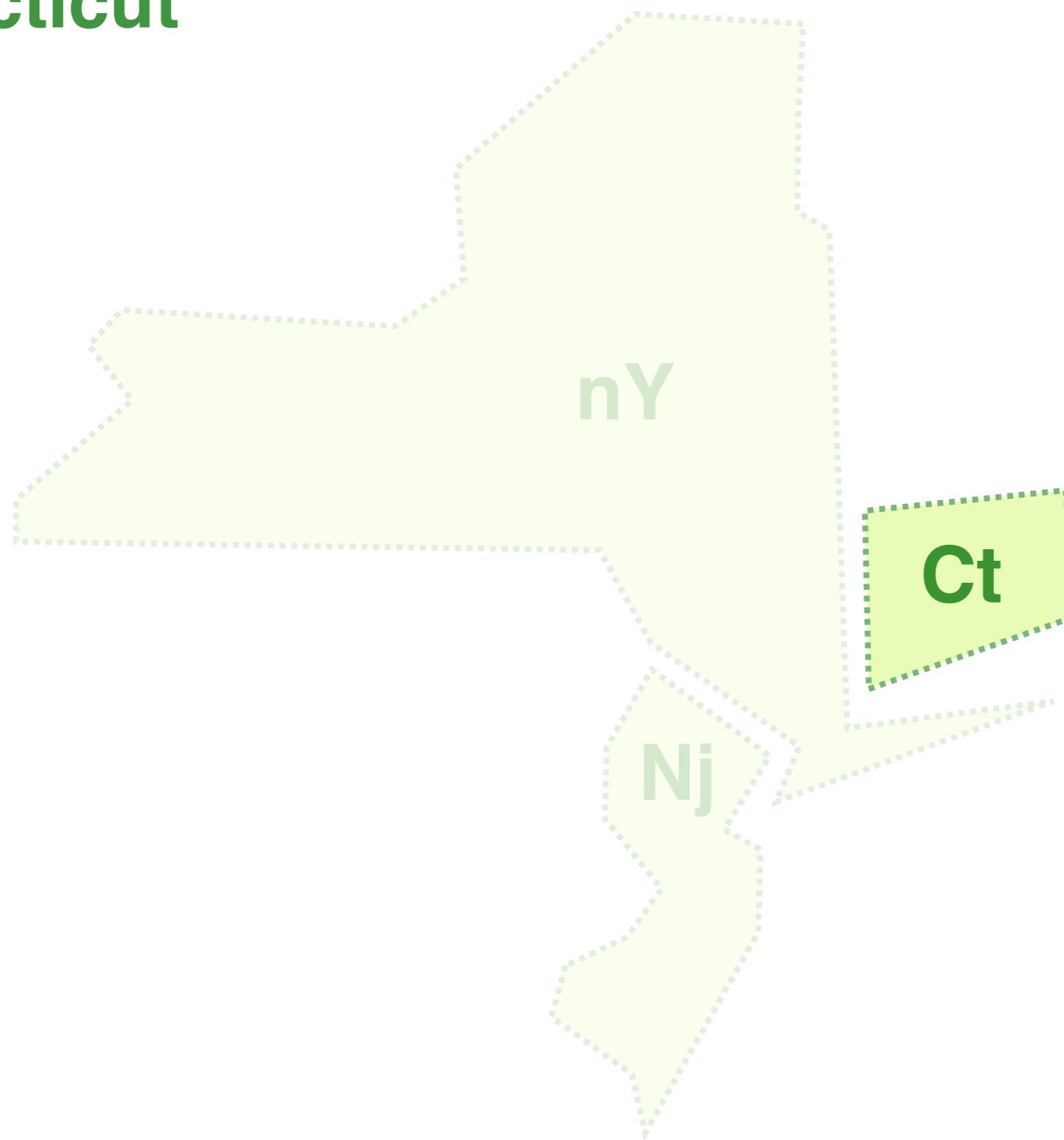
Legend

- Not Significant
- High-High Cluster
- High-Low Outlier
- Low-High Outlier
- Low-Low Cluster



Analyzing urban (un)Livability

3
Connecticut

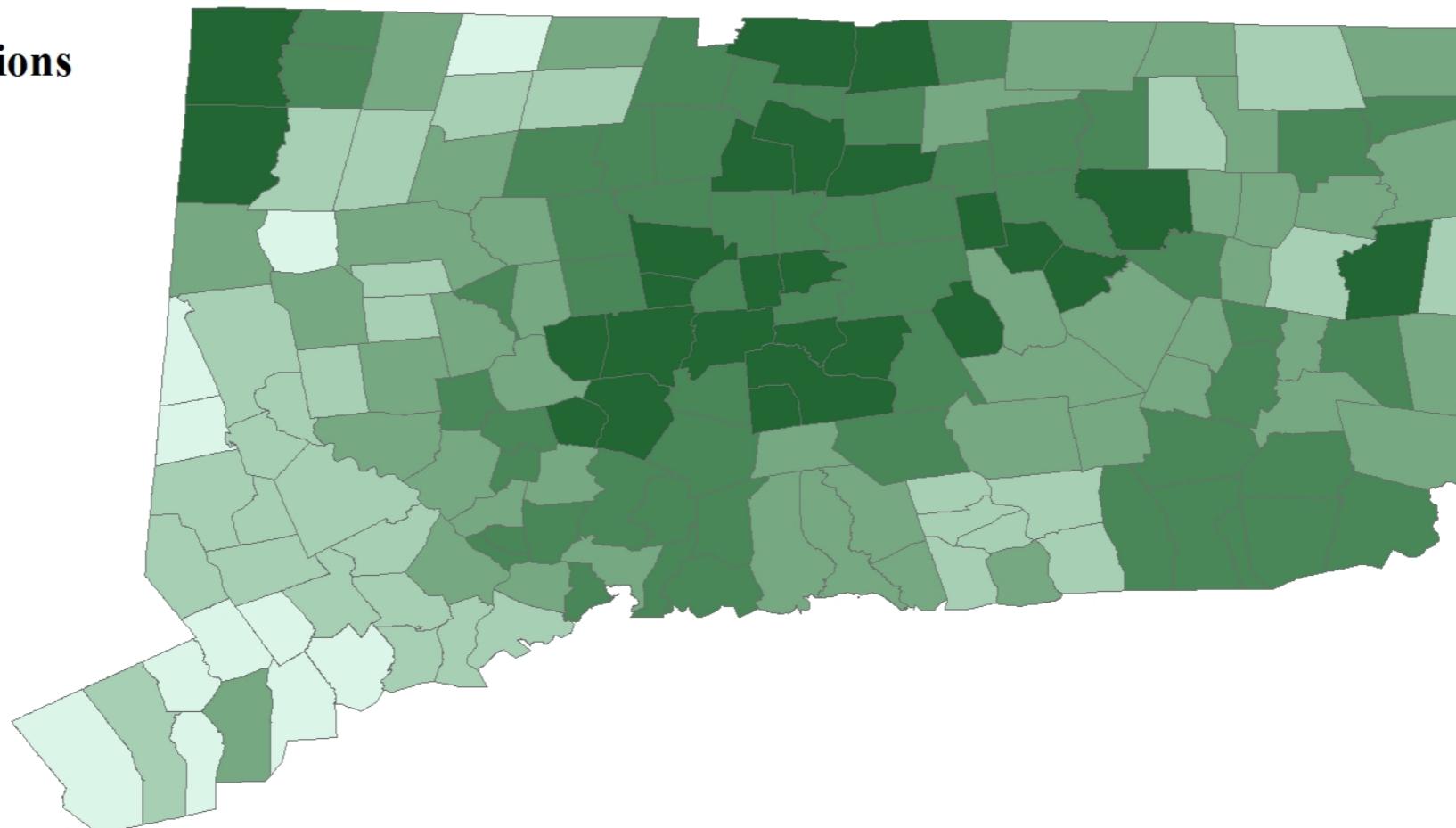
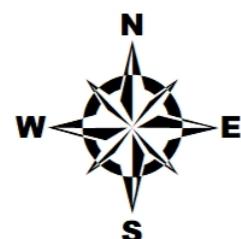
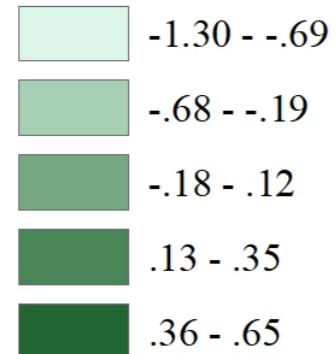


Connecticut Livability Scores

Legend

County Subdivisions

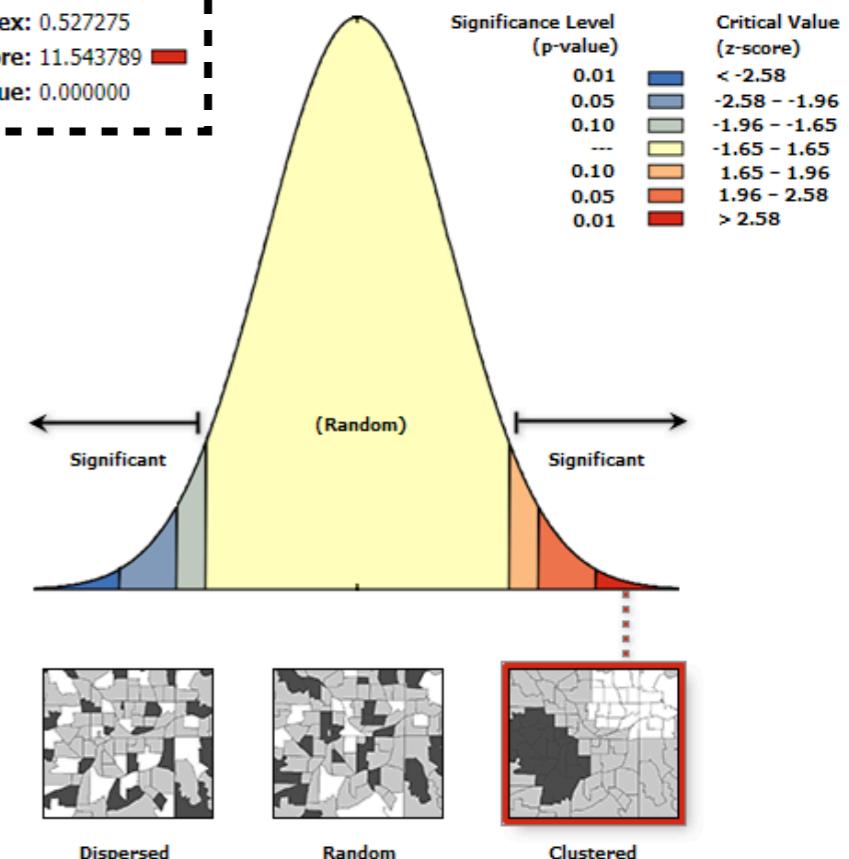
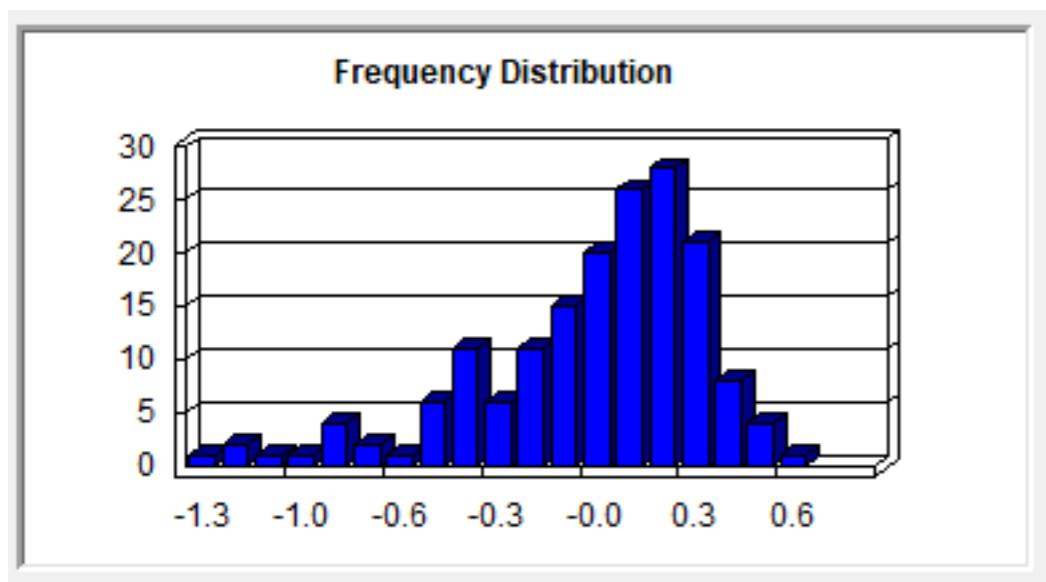
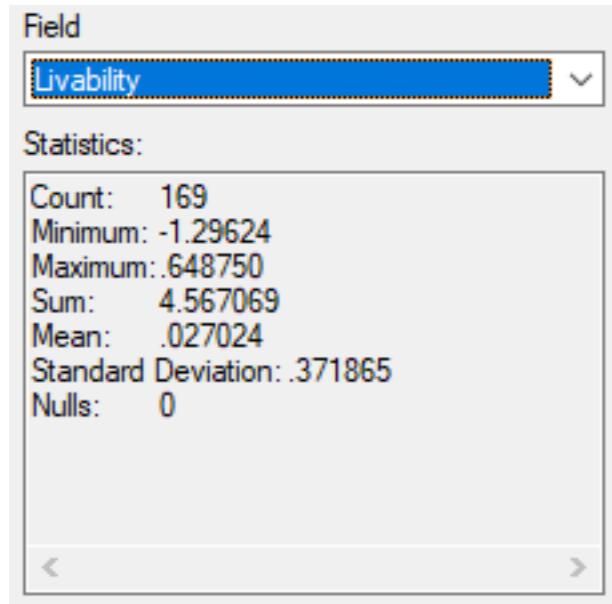
Livability Scores



Spatial Autocorrelation Report

Moran's Index: 0.53
Z-score: 11.54
P-value: 0.00

** Clustered ** ** Spatial Autocorrelation Report



Given the z-score of 11.543788955, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Global Moran's I Summary

Moran's Index:	0.527275
Expected Index:	-0.005952
Variance:	0.002134
z-score:	11.543789
p-value:	0.000000

Dataset Information

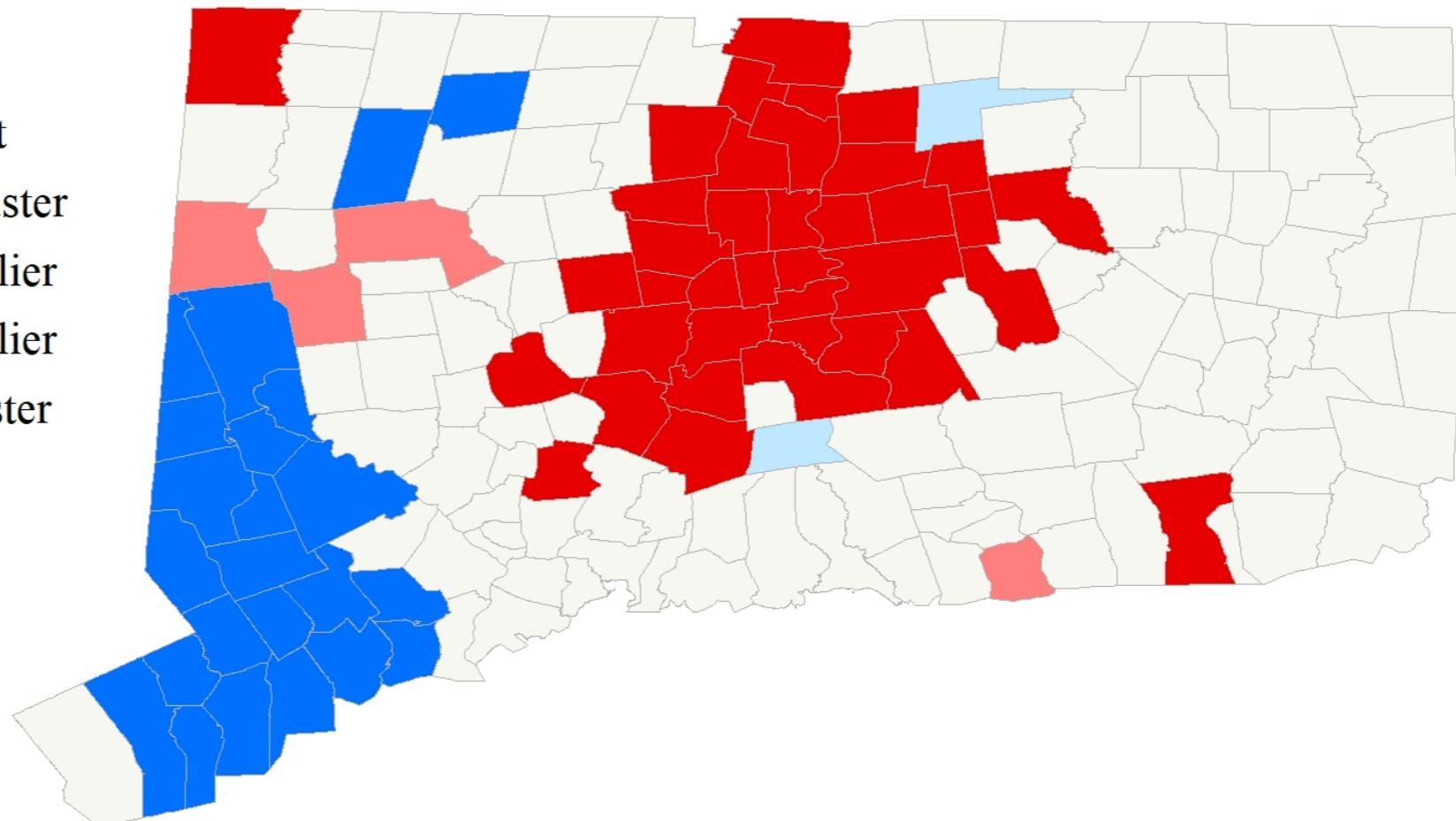
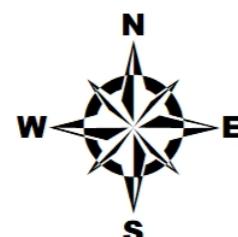
Input Feature Class:	final_conn
Input Field:	LIVABILITY
Conceptualization:	CONTIGUITY_EDGES_ONLY
Distance Method:	EUCLIDEAN
Row Standardization:	False
Distance Threshold:	None
Weights Matrix File:	None
Selection Set:	False

** Frequency Distribution

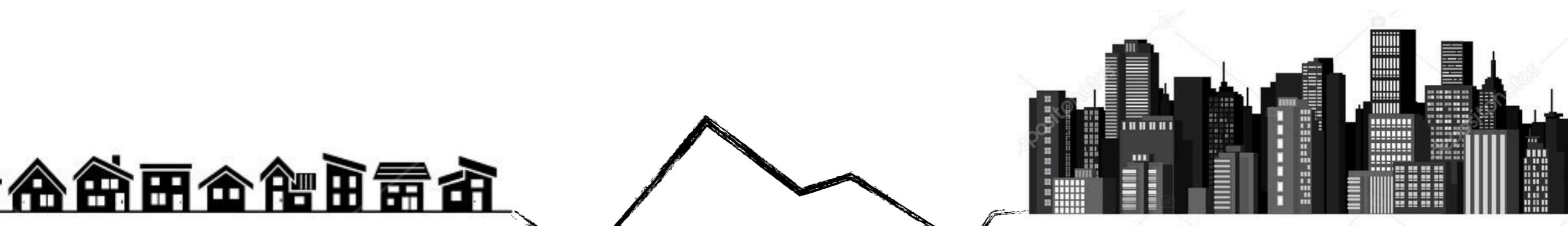
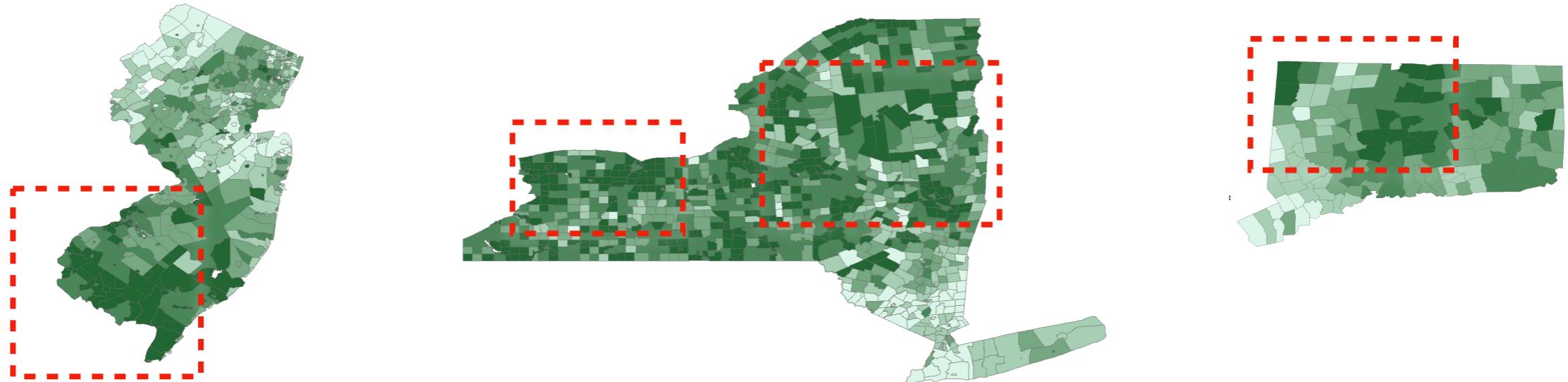
Connecticut Livability Clustering

Legend

- Not Significant
- High-High Cluster
- High-Low Outlier
- Low-High Outlier
- Low-Low Cluster



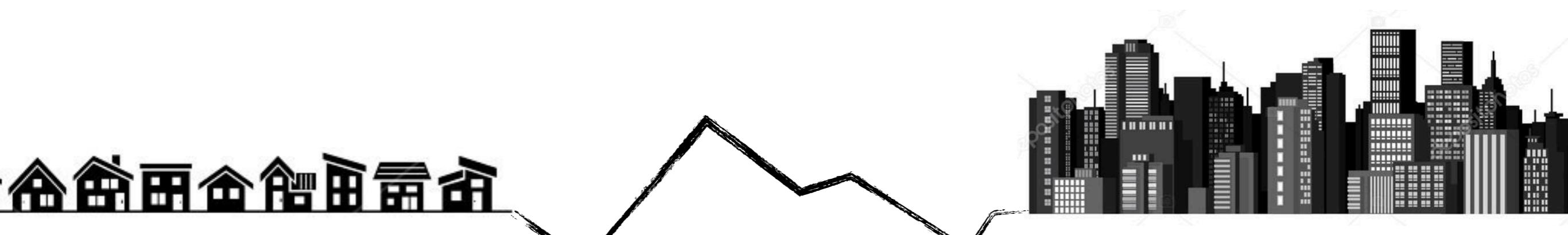
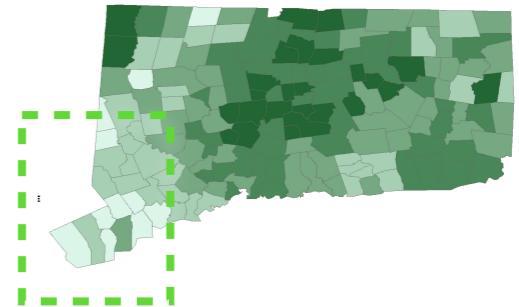
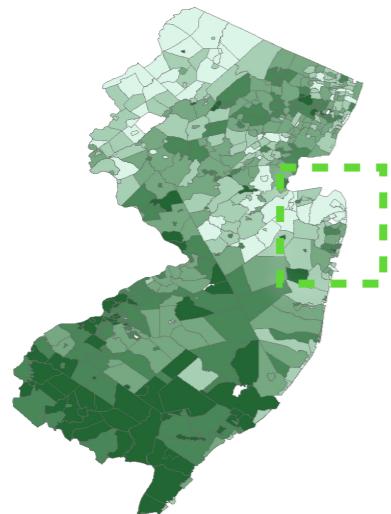
(un)Livability??



**Rural area /
Urban Sprawl**

Urban area

(un)Livability??



**Rural area /
Urban Sprawl**

Urban area

< Thank you >

