

Boston Food Establishment Inspections

Courtney Pacheco



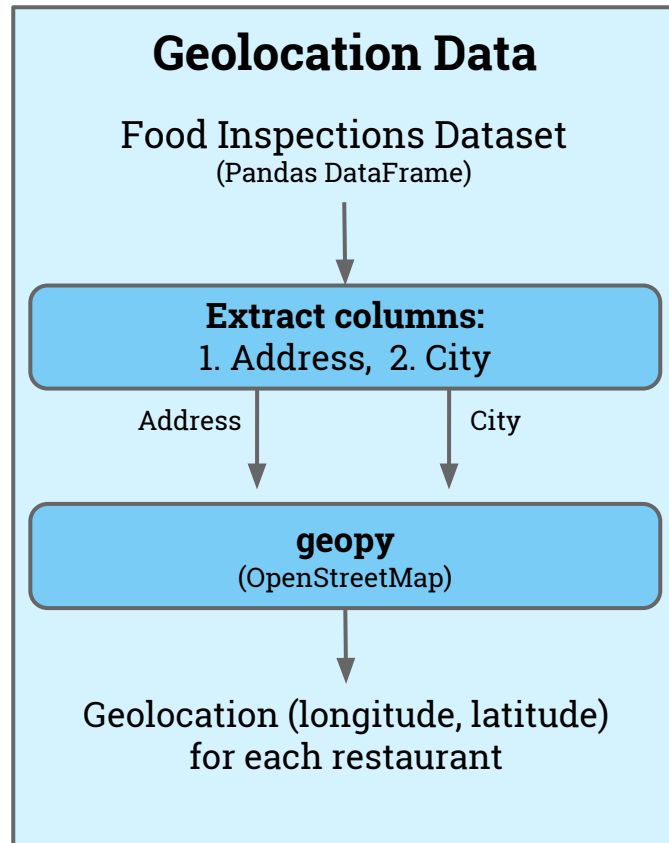
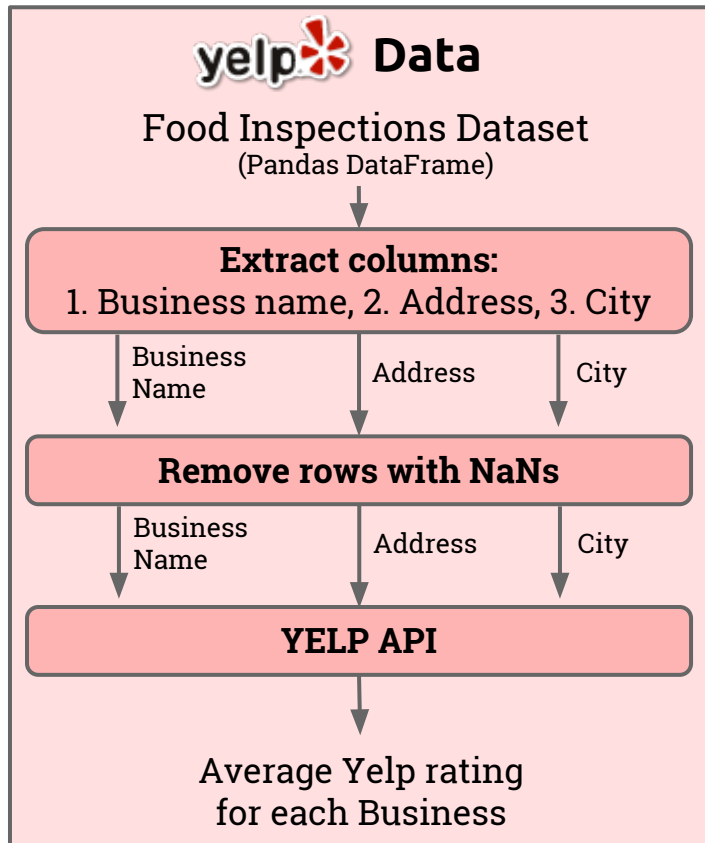
The Dataset

- Food Establishment Inspections dataset from CityofBoston.gov
- For each restaurant, it contains info about:
 - violations (type, level: 0-3, date of violation, etc.)
 - whether the restaurant passed/failed the inspection
 - geolocation of the restaurant
 - ...and more

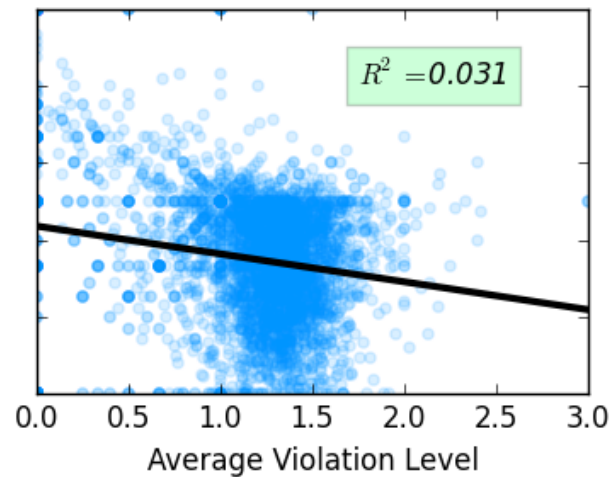
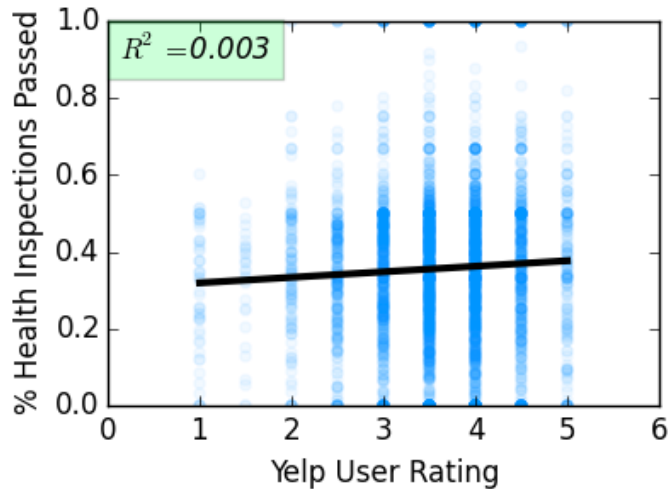
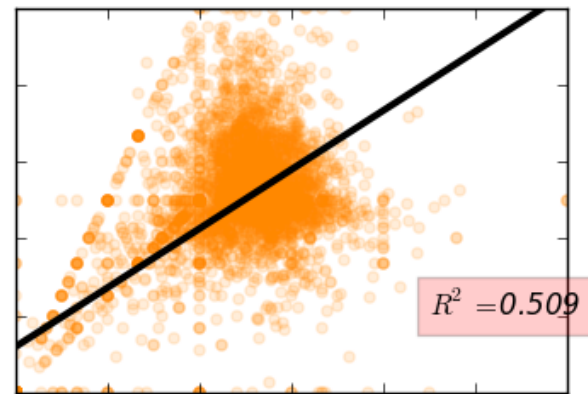
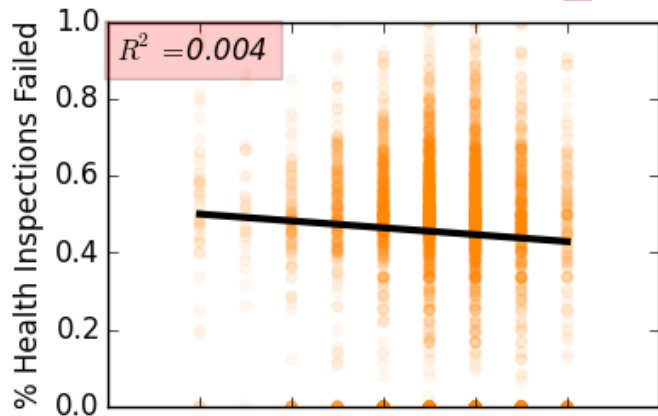
Project Goals

1. To investigate the possible relationship between # of violations and Yelp user rating
2. To investigate the possible relationship between # of violations and restaurant location
3. To compare hospitals to one another in terms of Yelp user rating and violation




















































Data Collection



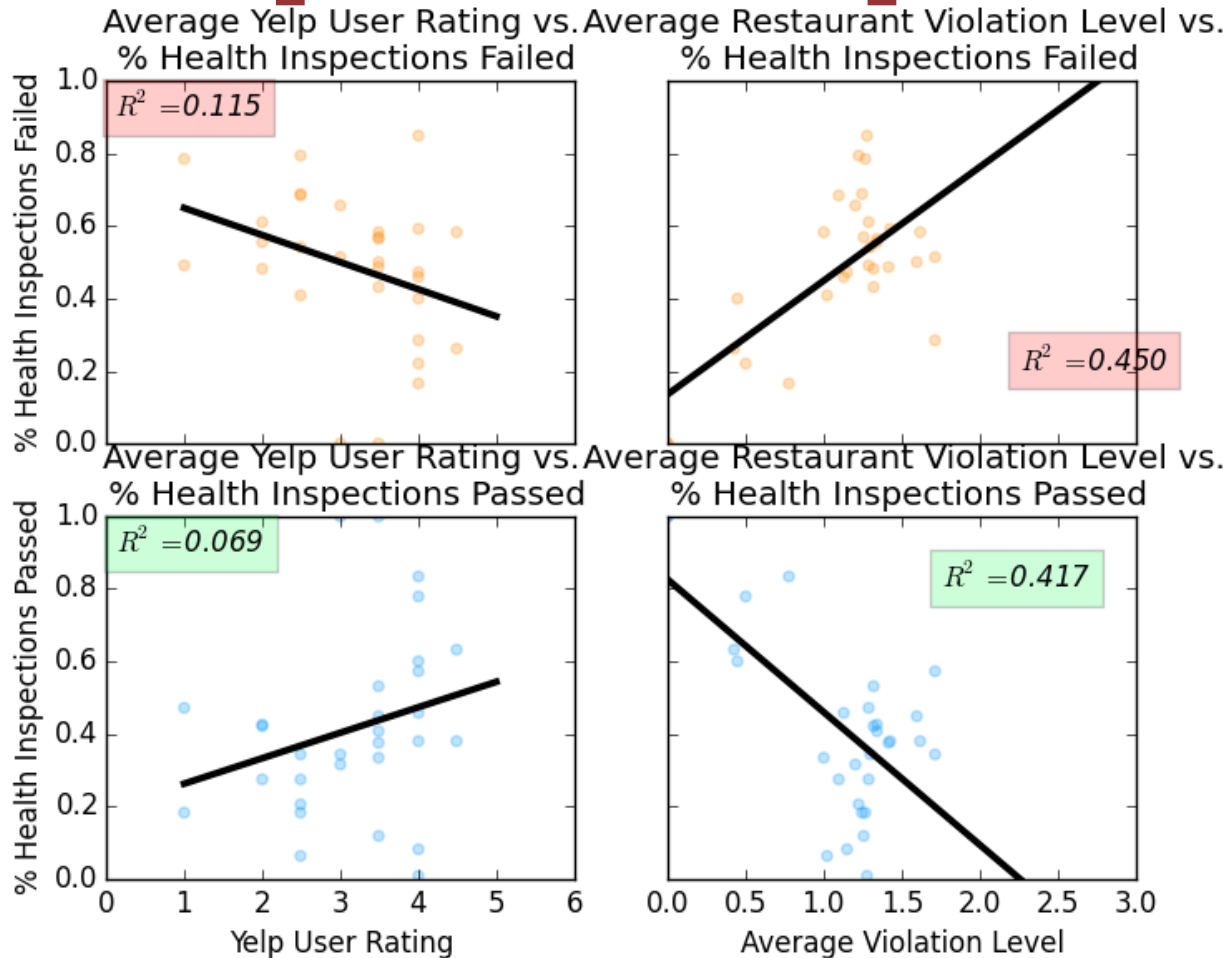
Yelp Results






















































Restaurant Rankings (Based on % of Health Inspections Failed)

	Restaurant	% of Health Inspections Failed	Average  Rating	License Status
1	Dunkin Donuts Space no. 86	100% (7/7)	     (88)	Active
2	MDM Noodles	100% (8/8)	     (22)	Active
3	Dudley Square Grille	100% (10/10)	     (22)	Active
4	Boston Indian Kitchen, Inc.	100% (8/8)	     (1277)	Active
5	King's Pizza and Grill	100% (14/14)	     (3)	Active
6	Blue Fuji	100% (3/3)	     (261)	Active
7	Rita's Catering	100% (3/3)	     (3)	Active
8	Papa Rino's Pizza	100% (30/30)	     (3)	Inactive
9	Casa Columbia Restaurant & Bakery	100% (62/62)	     (357)	Active
10	Soup's On	100% (5/5)	     (6)	Inactive

Yelp Results: Hospitals

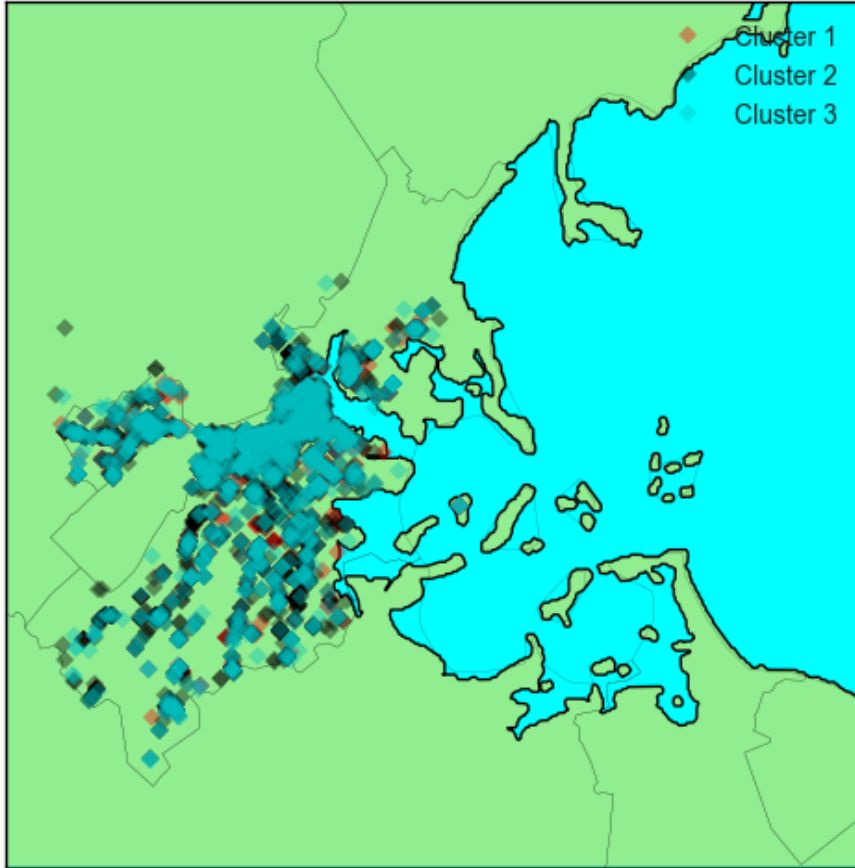


Hospital Rankings (Based on % of Health Inspections Failed)

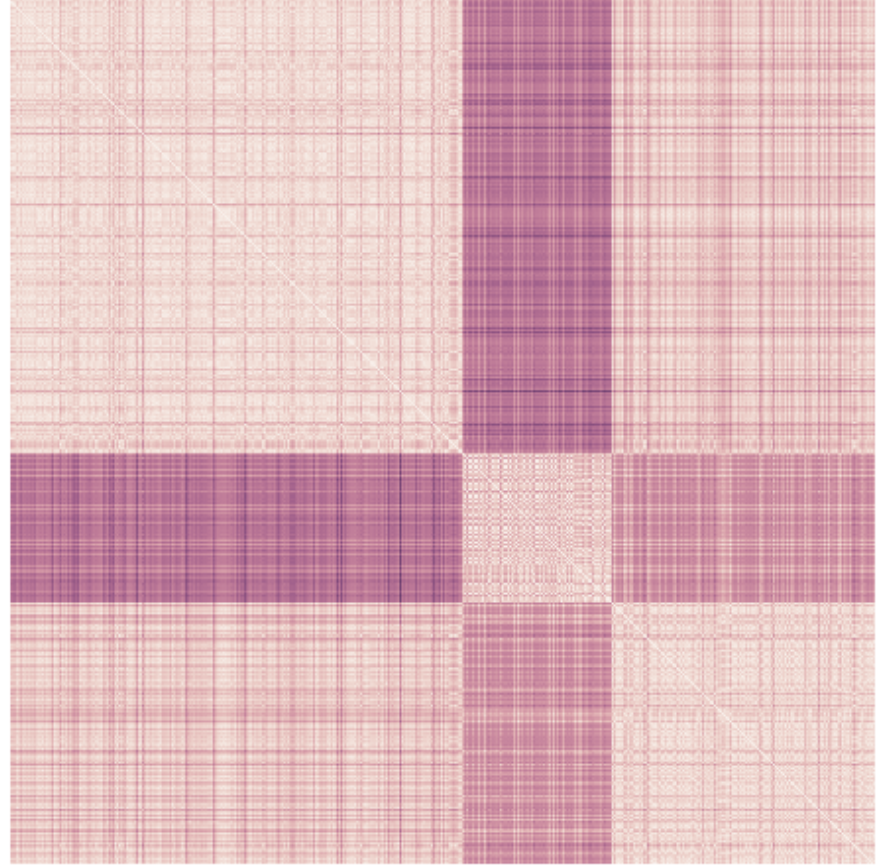
	Hospital	% of Health Inspections Failed		yelp  Rating					
1	Boston Medical Center (BU)	78.9%	(221/280)						(43)
2	Tufts	76.5%	(110/134)						(740)
3	Carney Hospital	69.0%	(98 / 142)						(17)
4	Brigham & Women's Faulkner Hospital	65.8%	(52 / 79)						(22)
5	Carter Fuller Mental Hospital	60.9%	(67 / 110)						(3)
6	St. Elizabeth Hospital	58.2%	(32 / 55)						(72)
7	Jewish Memorial Hospital	56.7%	(38 / 67)						(71)
8	Mass. Eye & Ear Infirmary	56.6%	(82 / 145)						(37)
9	Spaulding Rehabilitation Hospital	54.2%	(27 / 52)						(6)
10	Beth Israel Deaconess Hospital	49.0%	(148 / 299)						(128)

Clustering Results

Clustering: Violation Level, Pass Rate, Fail Rate



Heat Map of Clustering



Allston/Brighton

Avg violation level: 1.15
Avg Yelp rating: 3.63
Avg % Health Inspect. Failed: 56.9%

Charlestown

Avg violation level: 1.22
Avg Yelp rating: 3.64
Avg % Health Inspect. Failed: 54.2%

Davis Square

Avg violation level: 0.93
Avg Yelp rating: 3.56
Avg % Health Inspect. Failed: 51.8%

Dudley Square

Avg violation level: 1.19
Avg Yelp rating: 3.64
Avg % Health Inspect. Failed: 56.6%

Back Bay

Avg violation level: 1.13
Avg Yelp rating: 3.72
Avg % Health Inspect. Failed: 54.7%

Chinatown

Avg violation level: 1.13
Avg Yelp rating: 3.54
Avg % Health Inspect. Failed: 55.7%

Dorchester

Avg violation level: 1.20
Avg Yelp rating: 3.57
Avg % Health Inspect. Failed: 52.1%

East Boston

Avg violation level: 1.09
Avg Yelp rating: 3.52
Avg % Health Inspect. Failed: 50.4%

Beacon Hill

Avg violation level: 1.25
Avg Yelp rating: 3.59
Avg % Health Inspect. Failed: 59.5%

College Hill

Avg violation level: 0.38
Avg Yelp rating: 3.83
Avg % Health Inspect. Failed: 40.0%

DownCity

Avg violation level: 1.31
Avg Yelp rating: 3.17
Avg % Health Inspect. Failed: 61.9%

East Cambridge

Avg violation level: 1.10
Avg Yelp rating: 3.55
Avg % Health Inspect. Failed: 62.8%

Brookline Village

Avg violation level: 1.31
Avg Yelp rating: 3.80
Avg % Health Inspect. Failed: 65.2%

Coolidge Corner

Avg violation level: 0.75
Avg Yelp rating: 3.70
Avg % Health Inspect. Failed: 49.7%

Downtown

Avg violation level: 1.18
Avg Yelp rating: 3.68
Avg % Health Inspect. Failed: 56.7%

East Side

Avg violation level: 0.27
Avg Yelp rating: 5.00
Avg % Health Inspect. Failed: 18.2%

<div>Fenway</div> <div>-----</div> <div>Avg violation level: 1.04</div> <div>Avg Yelp rating: 3.61</div> <div>Avg % Health Inspect. Failed: 52.3%</div>	<div>Inman Square</div> <div>-----</div> <div>Avg violation level: 0.93</div> <div>Avg Yelp rating: 3.50</div> <div>Avg % Health Inspect. Failed: 57.3%</div>	<div>Mission Hill</div> <div>-----</div> <div>Avg violation level: 1.14</div> <div>Avg Yelp rating: 3.62</div> <div>Avg % Health Inspect. Failed: 50.6%</div>	<div>Roslindale</div> <div>-----</div> <div>Avg violation level: 1.31</div> <div>Avg Yelp rating: 3.12</div> <div>Avg % Health Inspect. Failed: 54.3%</div>
<div>Financial District</div> <div>-----</div> <div>Avg violation level: 1.20</div> <div>Avg Yelp rating: 3.79</div> <div>Avg % Health Inspect. Failed: 54.8%</div>	<div>Jamaica Plain</div> <div>-----</div> <div>Avg violation level: 1.13</div> <div>Avg Yelp rating: 3.78</div> <div>Avg % Health Inspect. Failed: 51.6%</div>	<div>North Cambridge</div> <div>-----</div> <div>Avg violation level: 1.43</div> <div>Avg Yelp rating: 4.00</div> <div>Avg % Health Inspect. Failed: 66.0%</div>	<div>South Boston</div> <div>-----</div> <div>Avg violation level: 1.08</div> <div>Avg Yelp rating: 3.62</div> <div>Avg % Health Inspect. Failed: 50.7%</div>
<div>Harvard Square</div> <div>-----</div> <div>Avg violation level: 1.04</div> <div>Avg Yelp rating: 3.70</div> <div>Avg % Health Inspect. Failed: 52.7%</div>	<div>Kendall Square/MIT</div> <div>-----</div> <div>Avg violation level: 1.04</div> <div>Avg Yelp rating: 3.55</div> <div>Avg % Health Inspect. Failed: 53.1%</div>	<div>North End</div> <div>-----</div> <div>Avg violation level: 1.08</div> <div>Avg Yelp rating: 3.76</div> <div>Avg % Health Inspect. Failed: 55.3%</div>	<div>South End</div> <div>-----</div> <div>Avg violation level: 1.03</div> <div>Avg Yelp rating: 3.78</div> <div>Avg % Health Inspect. Failed: 58.1%</div>
<div>Hyde Park</div> <div>-----</div> <div>Avg violation level: 0.96</div> <div>Avg Yelp rating: 3.35</div> <div>Avg % Health Inspect. Failed: 50.9%</div>	<div>Mattapan</div> <div>-----</div> <div>Avg violation level: 1.14</div> <div>Avg Yelp rating: 3.65</div> <div>Avg % Health Inspect. Failed: 55.1%</div>	<div>Porter Square</div> <div>-----</div> <div>Avg violation level: 0.55</div> <div>Avg Yelp rating: 3.75</div> <div>Avg % Health Inspect. Failed: 33.3%</div>	