OLS Regression

$$Theft_{(t,j)} = \alpha + \beta_1 \boldsymbol{X}_{(t,j)} + \beta_2 \boldsymbol{X}_j + \epsilon_t$$

Spatial OLS Regression

$$Theft_{(t,j)} = \alpha + \beta_1 \boldsymbol{X}_{(t,j)} + \beta_2 \boldsymbol{X}_j + \beta_3 \bar{\boldsymbol{X}}_{(t,j_{neighbors})} + \beta_4 \bar{\boldsymbol{X}}_{(j_{neighbors})} + \epsilon_t$$

Table 1: Data Descriptions

	# Obs.	Avg # Obs/day	Source
Crimes - Theft	215,075	425	Chicago Police Department
Crimes - Non-Theft	128,487	253	
Building Violations	165,681	324	Chicago Department of Buildings
311 Graffiti Request	164,318	321	City of Chicago 311 Requests
311 Sanitation Request	28,537	55	
311 Alley Lights Out - Gangs	2,243	4	
311 Alley Lights Out - No Gangs	4,333	8	
311 Vacant Building - Gangs	2,243	4	
311 Vacant Building Out - No Gangs	4,333	8	
Food Inspection - Pass	16,945	33	Chicago Department of
Food Inspection - Pass w/Condition	5,674	11	Public Helath Food
Food Inspection - Fail	3,342	6	Protection Program
Red Light Tickets[1]	86,817	964	Chicago Tribune
Liquor Licenses[2]	4,541	n/a	Department of Business Affairs and Consumer Protection, City of Chicago
Tweets - Good Sentiment[3]	375	n/a	Twitter
Tweets - Bad Sentiment	62	n/a	

1. Red light ticket data is only available from 12/2/2013 to 1/3/2014
2. Liquor Licenses dataset is for current liscenses only so it is not shown over time.
3. Since the twitter dataset was added recently, there is no historical data past what was collected.