

Food Inspections Dataset

The [Food Inspections Dataset](#)¹ contains information on inspections of food establishments in Chicago from 2010 to the present. Curated by the Chicago Department of Public Health (CDPH), it is downloadable through the City of Chicago's Open Data Portal. As of April 16, 2017, the dataset contained information on 146,897 inspections carried out on 32,042 individual establishments.

The City of Chicago describes the data collection methodology as follows:

"Inspections are performed by staff from the Chicago Department of Public Health's Food Protection Program using a standardized procedure. The results of the inspection are inputted into a database, then reviewed and approved by a State of Illinois Licensed Environmental Health Practitioner (LEHP)."

Studies that have used this dataset include the [Food Inspection Forecasting Project](#)² carried out by the City of Chicago's advanced analytics team and the Chicago Department of Public Health to predict critical violations at food establishments, and a [CDC report](#)³ examining the outcomes of [Foodborne Chicago](#), an online platform where the public can report restaurant-related food poisoning to the CDPH.

The variables included in the dataset are described in the table on the next page.

¹ Chicago Department of Public Health. 2017. Food Inspections Dataset. Accessed April 16, 2017. <https://data.cityofchicago.org/Health-Human-Services/Food-Inspections/4ijn-s7e5>

² City Of Chicago. Food Inspection Forecasting. Accessed April 19, 2017. <https://chicago.github.io/food-inspections-evaluation/>.

³ [3] Harris, Jenine K., Raed Mansour, Bechara Choucair, Joe Olson, Cory Nissen, and Jay Bhatt. "Health Department Use of Social Media to Identify Foodborne Illness - Chicago, Illinois, 2013-2014." Morbidity and Mortality Weekly Report. Centers for Disease Control and Prevention, August 15, 2014. <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6332a1.htm>.

Table 1: Description of Variables

Variable	Description*	# Unique Values** (% Total Obs.)	# Missing Values (% Total Obs.)
DBA/'Doing business as'	Legal name of establishment	23,325	0
AKA/'Also known as'	Name the public would know the establishment as	23,082	2,698 (< 2%)
License number	Unique ID assigned to each establishment by the Department of Business Affairs and Consumer Protection	32,042	14 (< 1%)
Type of facility	Type of facility	371	4,540 (3 %)
Risk category of facility	Category of risk of adversely affecting the public's health, 1 being the highest and 3 the lowest. Establishments at higher risk categories are inspected more frequently.	4: - <i>High</i> (70%) - <i>Medium</i> (21%) - <i>Low</i> (10%) - <i>All</i> (< 1%)	66 (< 1%)
Street address	Street address of establishment	16,811	0
City	City	56	150 (1%)
State	State	1: <i>IL</i>	8 (< 1%)
Zip	Zip code of establishment	100	98 (< 1%)
Inspection date	Date of inspection	1,850	0
Inspection type	Inspection type	90	1 (< 1%)
Inspection result	Inspection result	7: - <i>Pass</i> (59%) - <i>Fail</i> (19%) - <i>Pass with conditions</i> (9%) - <i>Out of business</i> (9%) - <i>No entry</i> (3%) - <i>Not ready</i> (< 1%) - <i>Business not located</i> (< 1%)	0
Violations	Violations noted during inspection, and for each violation, the requirement the establishment must meet to not receive it. Description of conditions at the establishment relevant to each violation.	116,346	11,678 (8%, excluding cases where inspection result is not "Pass" or "Fail")

*Adapted from the official description of the data, available at: <https://data.cityofchicago.org/api/assets/BAD5301B-681A-4202-9D25-51B2CAE672FF>

**After standardization

N = 146,897

Table 2: The thirty most common facility types by risk level

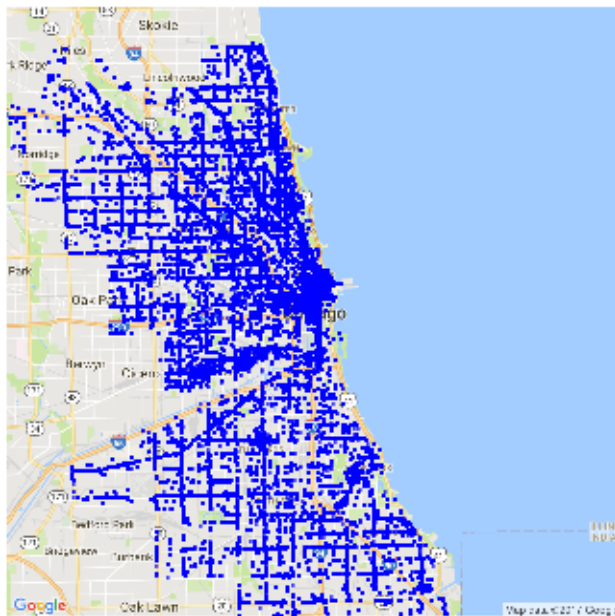
Facility Type	Average Risk Level (1 = High, 2 = Medium, 3 = Low)	# Obs.
DAYCARE	1.000	51
DAYCARE (2 YEARS)	1.000	50
DAYCARE (UNDER 2 YEARS)	1.000	193
GROCERY/RESTAURANT	1.000	50
HOSPITAL	1.000	360
LONG TERM CARE	1.000	867
DAYCARE ABOVE AND UNDER 2 YEARS	1.009	1,629
CHILDREN'S SERVICES FACILITY	1.012	1,595
DAYCARE COMBO 1586	1.016	763
DAYCARE (2 - 6 YEARS)	1.021	2,323
CATERING	1.033	853
GOLDEN DINER	1.039	411
SHARED KITCHEN	1.127	55
BANQUET HALL	1.129	232
SHELTER	1.131	84
SCHOOL	1.151	9,263
RESTAURANT	1.218	9,6249
SPECIAL EVENT	1.534	161
SHARED KITCHEN USER (LONG TERM)	1.616	172
BAKERY	1.622	2,156
MOBILE FOOD PREPARER	1.857	322
GROCERY STORE	2.077	19,821
KIOSK	2.078	102
WHOLESALE	2.328	515
CONVENIENCE STORE	2.768	56
GAS STATION	2.833	114
MOBILE FOOD DISPENSER	2.860	749
LIQUOR	2.929	694
CONVENIENCE	2.944	54
TAVERN	2.970	233

Table 3: Businesses that failed the most inspections (top 30)

Business	% Inspections Failed	# Obs.
LEONA'S RESTAURANT	41.667	48
EL TACONAZO RESTAURANT	39.216	51
FOREVER YOGURT	34.375	64
CITGO	29.894	378
PAPA JOHN'S PIZZA	29.808	104
MARATHON	28.947	76
TREASURE ISLAND FOODS	28.049	82
LAS ISLAS MARIAS	26.596	94
HAROLD'S CHICKEN	22.071	367
ARAMARK	19.444	108
SEE THRU CHINESE KITCHEN	18.699	246
PIZZA HUT	18.261	115
SHARKS FISH & CHICKEN	18.182	121
MCDONALD'S	17.827	1,638
POTBELLY SANDWICH WORKS	17.548	473
DUNKIN DONUTS/BASKIN ROBBINS	17.421	442
CHIPOTLE	17.357	386
J & J FISH & CHICKEN	17.073	164
DOMINO'S PIZZA	16.463	164
KENTUCKY FRIED CHICKEN	16.239	234
7-ELEVEN	15.950	1,116
DUNKIN DONUTS	15.506	1,077
POPEYE'S	15.308	503
WHOLE FOODS MARKET	14.907	161
FRESHII	13.986	143
JIMMY JOHN'S	13.877	454
AU BON PAIN	13.636	198
SUBWAY	12.658	3,089
STARBUCKS	11.200	1,000
CORNER BAKERY CAFE	10.440	182

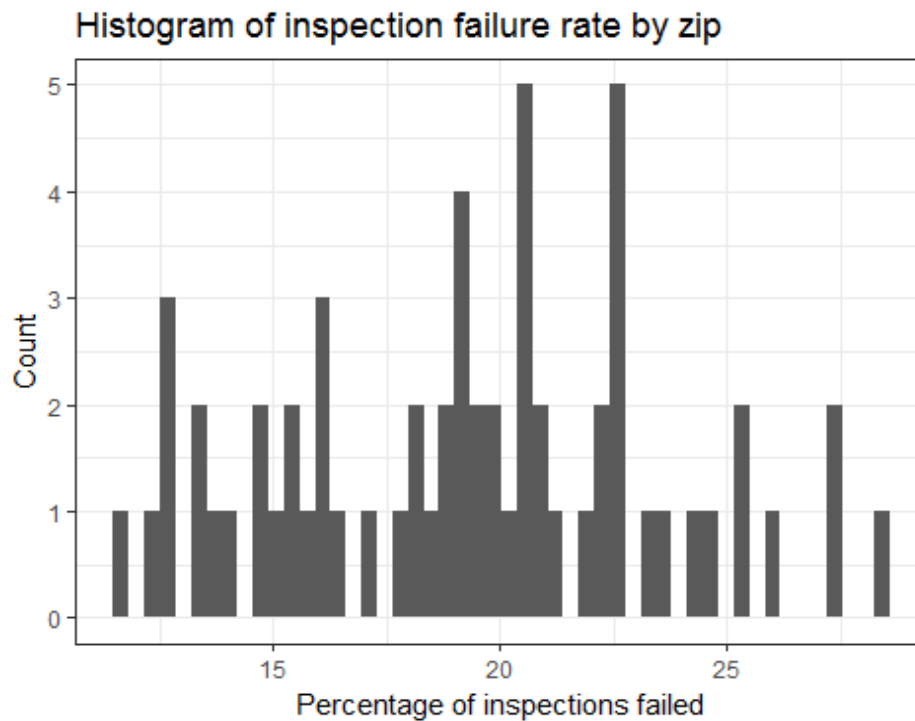
Figure 1: Where inspections take place

Food Inspections, Chicago 2010 - 2017



Source: Food Inspections, Chicago Department of Public Health

Figure 2 and Table 4: Distribution of inspection failure rate, by zip code



Min.	1 st Qu.	Median	Mean	3 rd Qu.	Max.
11.66%	16.09%	19.45%	19.27%	22.15%	28.43%

(Blue: <16%, Red: >22%, Green: In between)

