

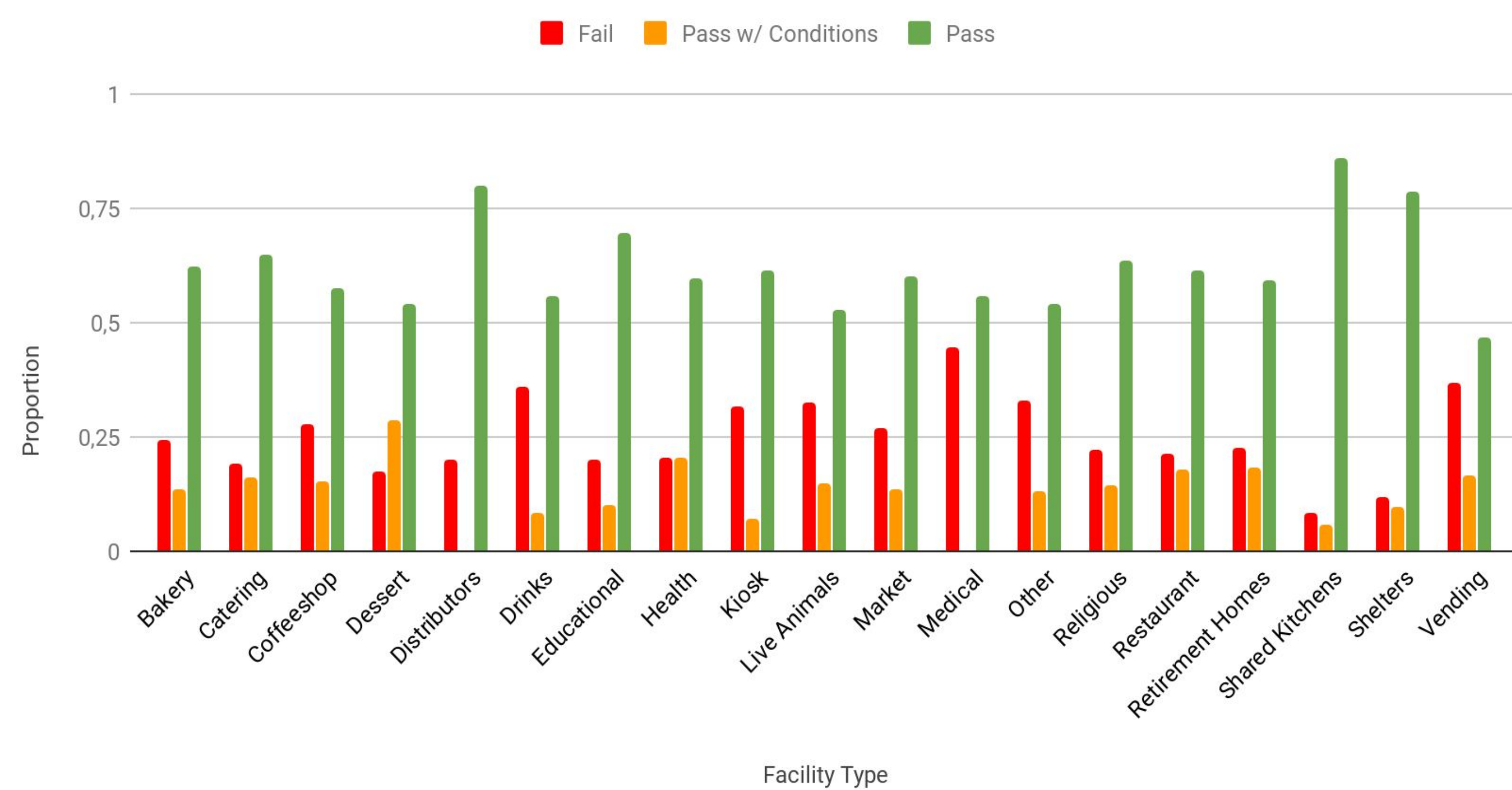


Do facility attributes influence food inspection outcomes for establishments in Chicago?

Does the type of an establishment influence its inspection outcome?

Insights: Medical establishments can not get passes with conditions: they either pass or fail the inspections. This strict approach might explain why they have the highest proportion of fails.

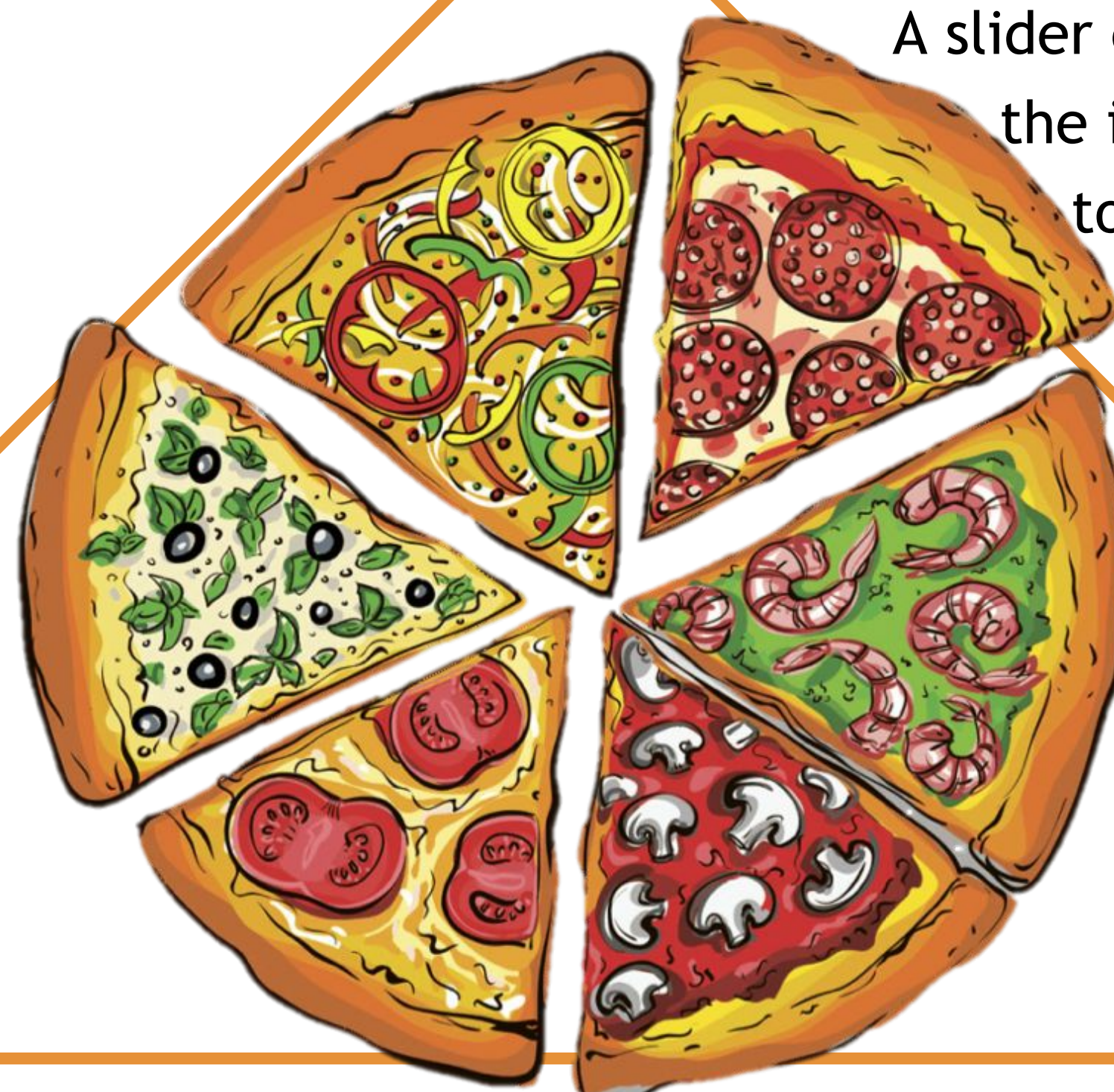
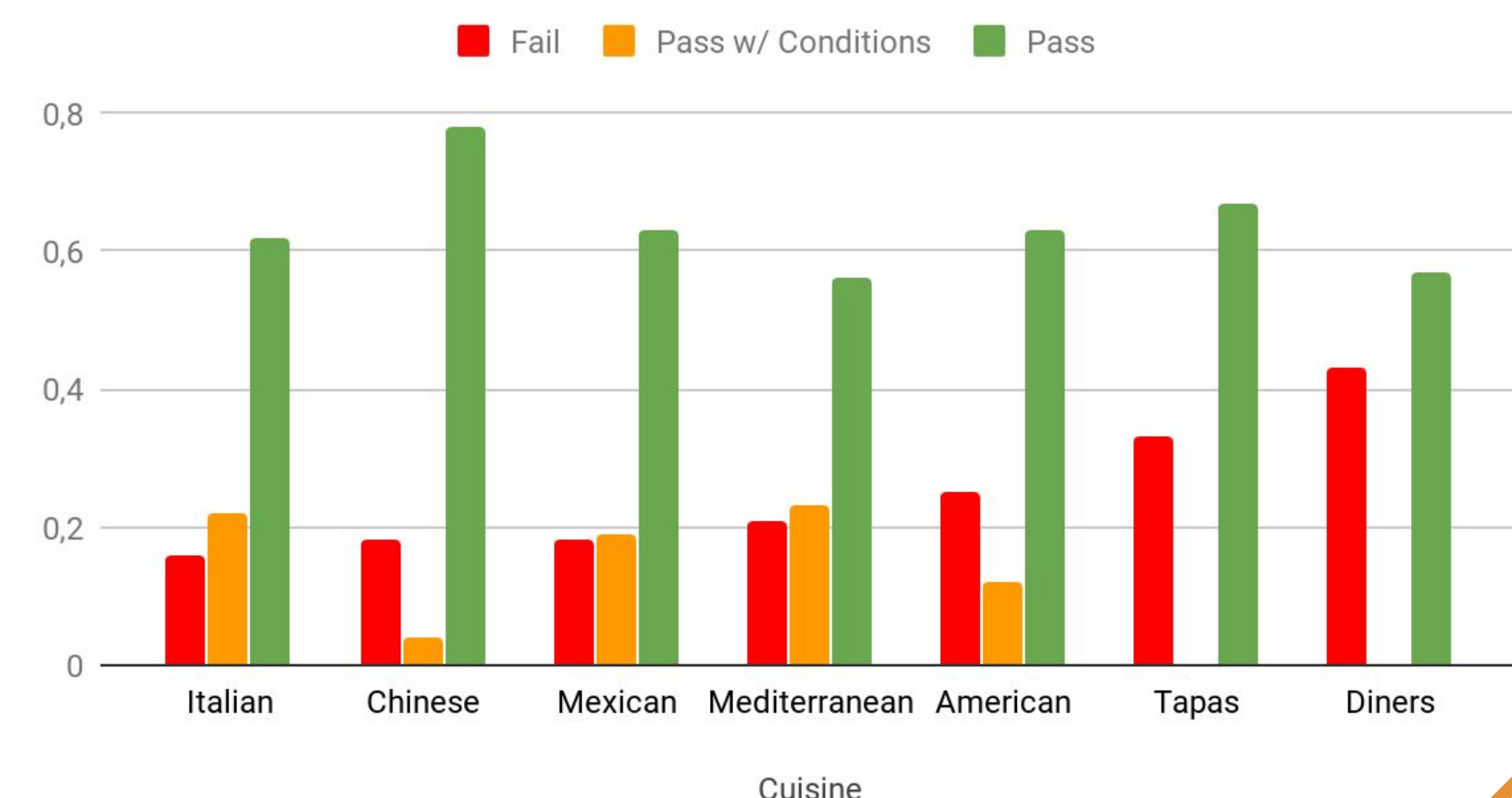
Proportion of Outcomes per Facility Type



Cuisine:

The food inspection results disprove several stereotypes about certain cuisines being riskier than others.

Proportion of outcomes per Cuisine



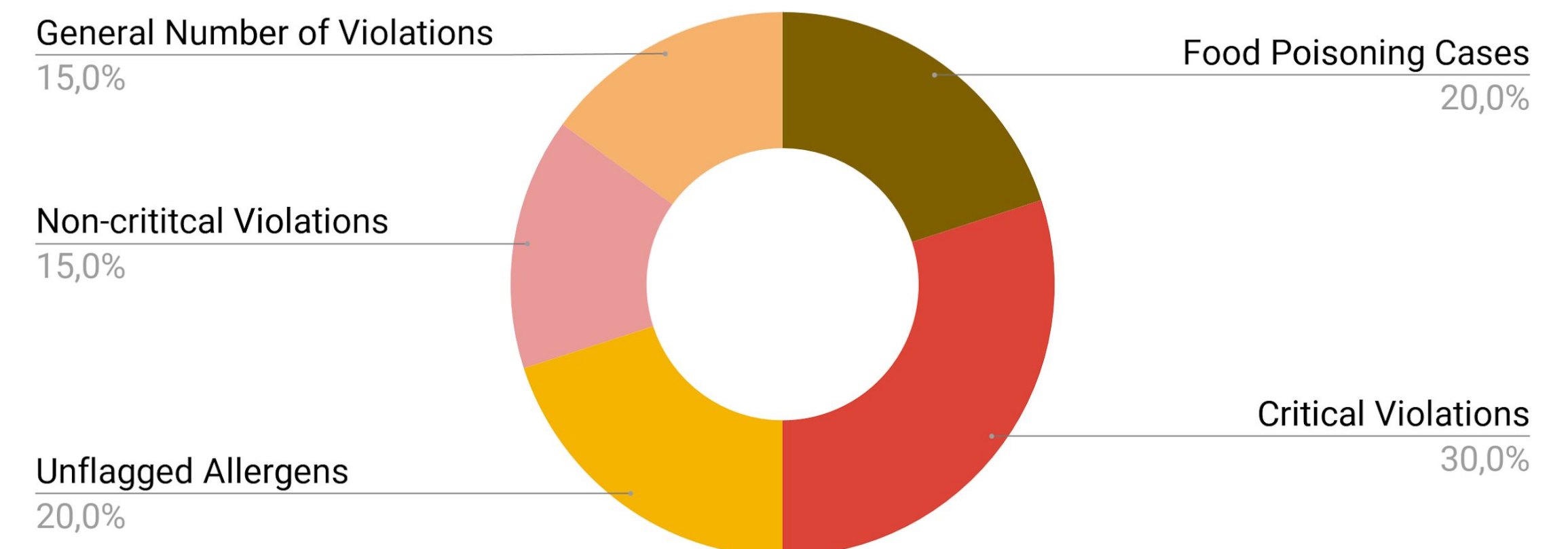
The Survival Guide: A personalized guide for eating out safely in Chicago

Technical score: heavily depends on the violations committed at the time of inspection. It takes into account cases of food poisoning caused by the establishment, or if there were any "hidden allergens" in the establishment.

$$\text{Total Score} = \alpha [\text{Technical Score}] + (1-\alpha) [\text{Yelp Score}]$$

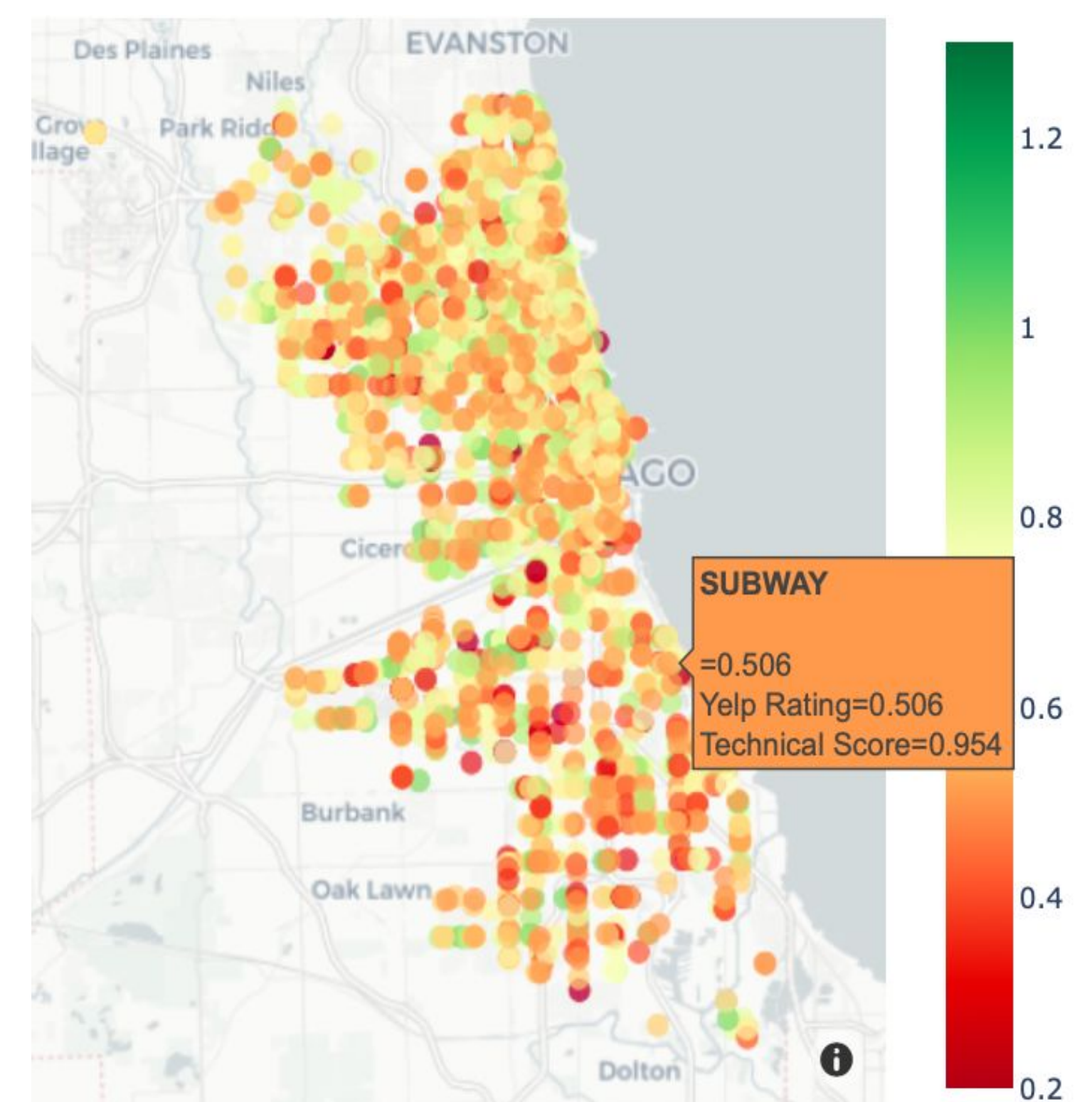
The pie chart shows the weight of each variable.

Technical Score Components



Public opinion score: depends on the opinion of the Yelp members.

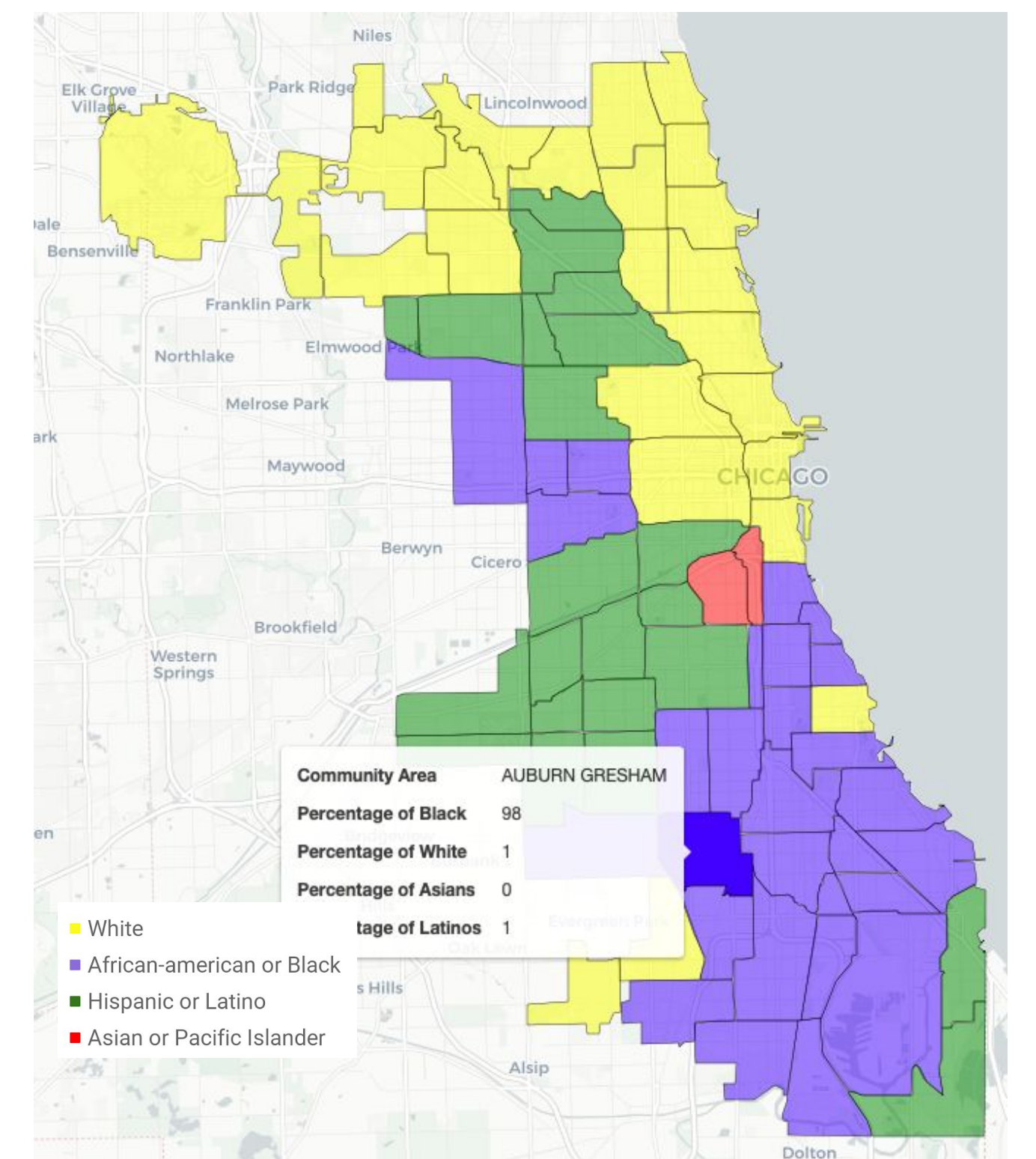
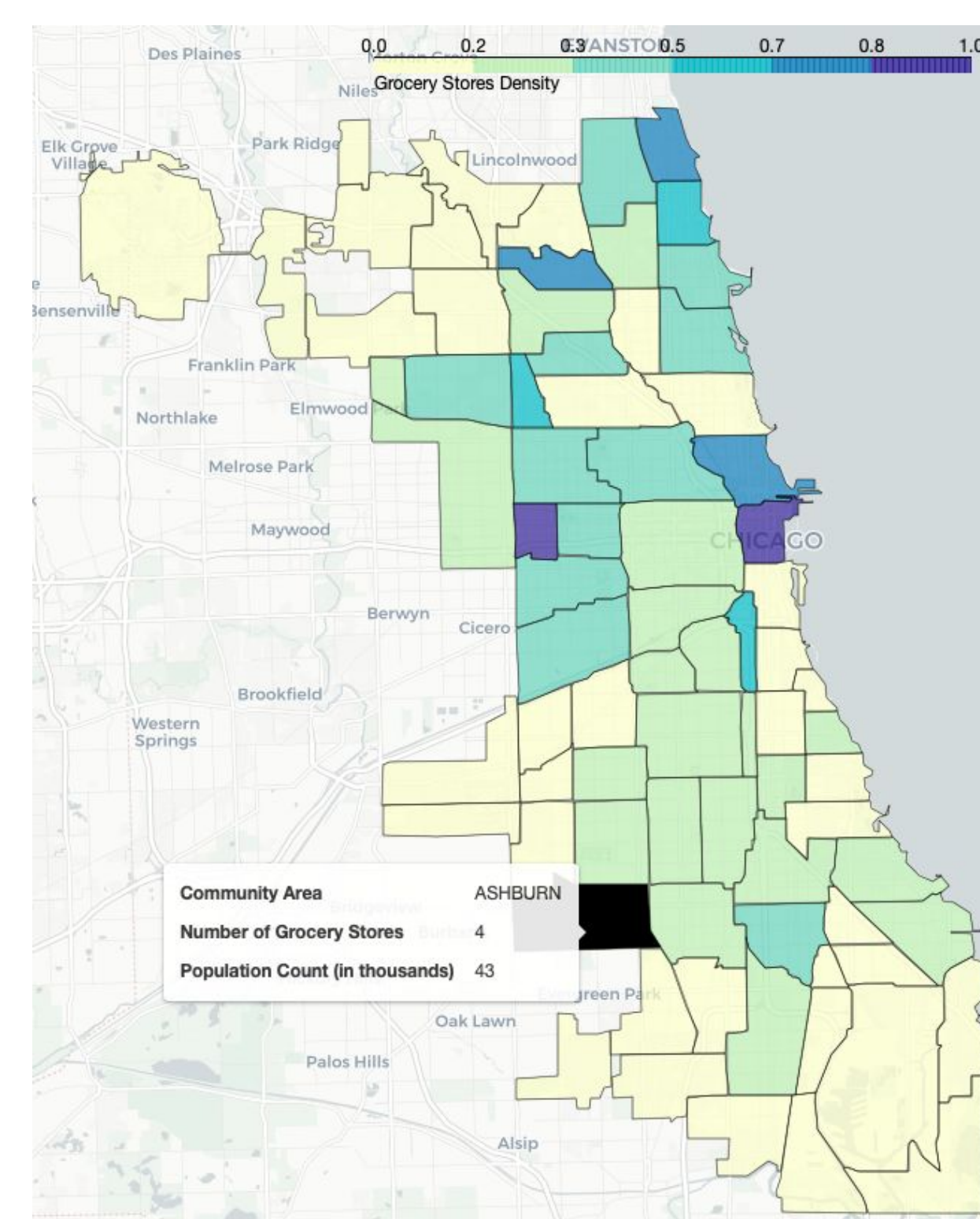
Interactive Map: We generated an interactive map that shows several food establishments in Chicago. A slider can be used to select the importance attributed to the user rating.



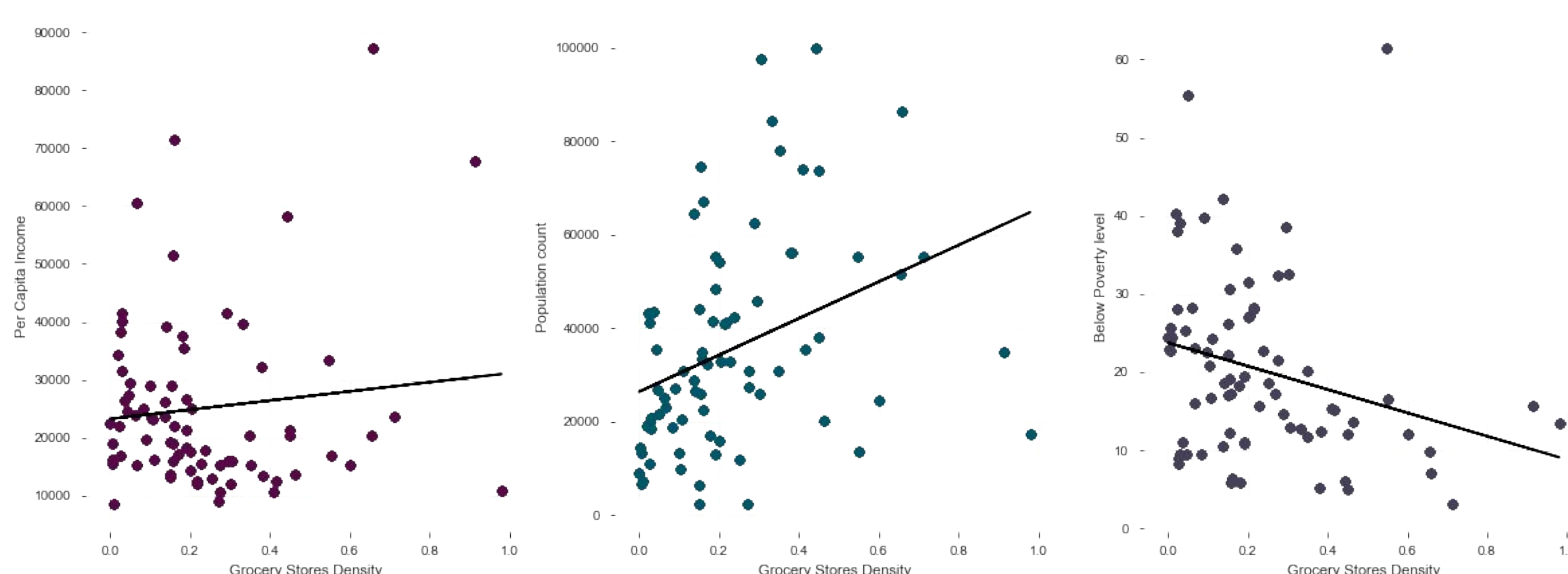
Chicago Food deserts: an indicator of social segregation?

Is access to healthy food equally accessible to everyone?

- We extract the locations of grocery stores from the food inspection dataset. The choropleth map of their density shows that the north has a higher concentration of grocery stores per surface than the south.
- Using data on ethnicities in the community areas, we identify neighbourhoods with majority of black, white and latino people. This confirms that *food deserts* are mostly present in black American neighbourhoods, as reported by the Illinois Advisory Committee to the United States Commission on Civil Rights.



Socio-economic indicators by density of grocery stores



What are the factors that influence the density of grocery stores?

- Fitting a regression of grocery stores' density as a function of socio-economic factors for different community areas, we see that the density is positively correlated with population count as well as with per capita Income. It is on the other hand negatively correlated with below poverty level. These observations make sense if we think about grocery stores wanting to maximize their profit.