What's Cooking

A study of restaurants in San Francisco





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Objective of the study

The purpose of this study was to help San Francisco City Council with:

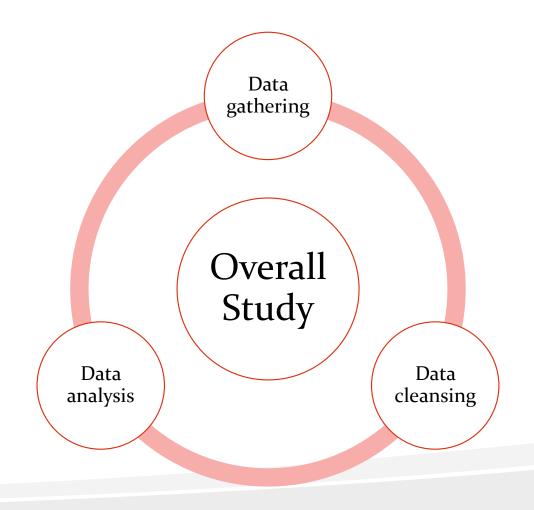
- 1. Identify the right neighbourhoods to build 3 new food hubs
- 2. Propose where these hubs should be if possible
- 3. Propose the cuisines that should feature in these hubs

Hub – identified as an area with more than a few restaurants in close proximity.



Process

- We identified the right data sources – inspection data for restaurants, neighbourhood data of San Francisco
- Data cleansing removing unnecessary columns and irrelevant records
- Applying concepts learnt in the course to determine how we can get closer to the objective



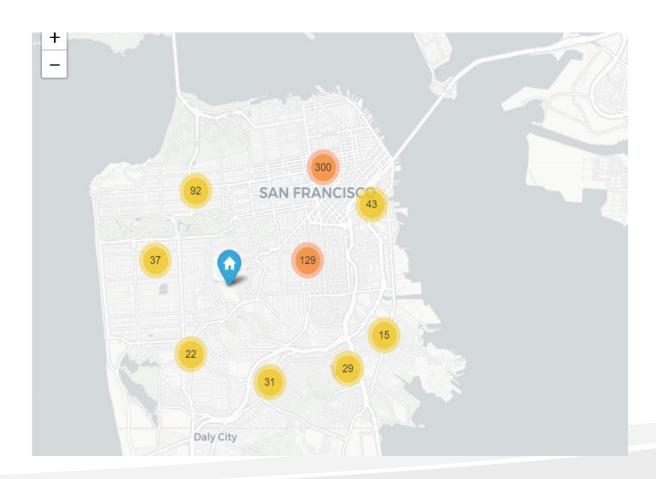


A consolidated dataset of restaurants and neighbourhoods was the starting point

| | busines | s_id | business_name | busines | ss_address | business_city | business_state | Postal_Code | busine |
|---|---------|------|---------------------------|---------|--------------|--|----------------|-------------|------------------|
| 0 | 97 | 975 | BREADBELLY | 1408 | Clement St | San Francisco | CA | 94118 | |
| 1 | 69 |)487 | Hakkasan San Francisco | | 1 Kearny St | San Francisco | CA | 94108 | |
| 2 | 91 | 044 | Chopsticks Restaurant | 461 | 5 Mission St | San Francisco | CA | 94112 | |
| 3 | 8!- | | violat | ion_id | violation | _description | risk_category | Neighbor | hood |
| 4 | 96 | 979 | 75_20190725_1 | 03124 | | ately cleaned sanitized food contact | Moderate Risk | , | Inner |
| 4 | | 694 | 87_20180418_1 | 03119 | | adequate and inaccessible ashing facili | Moderate Risk | China | atown |
| | | | | NaN | | NaN | NaN | | ocker nazon |
| | | 859 | 87_20180412_1 | 03132 | Imp | roper thawing methods | Moderate Risk | ⟨ Hayes \ | /alley |
| | | | | NaN | | NaN | NaN | . С | astro |
| | | | | NaN | | NaN | NaN | l . | uth of larket |
| | | | | NaN | | NaN | NaN | l Outer Mi | ssion |
| | | | | | | | | | |

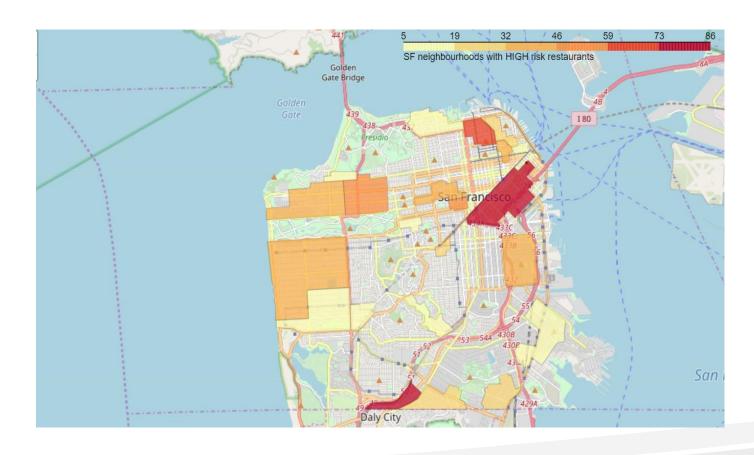


- All high-risk restaurants were identified
- They were plotted on the map to indicate areas to focus



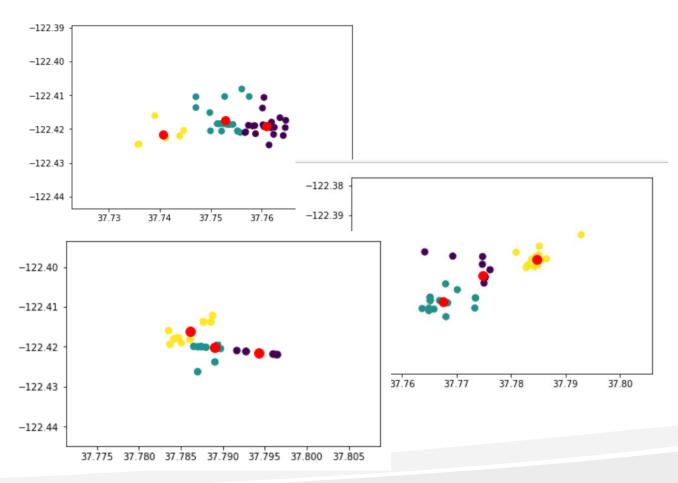


Mapping the high risk restaurants against neighbourhood limits helped identify the right neighbourhoods to build the new food hubs



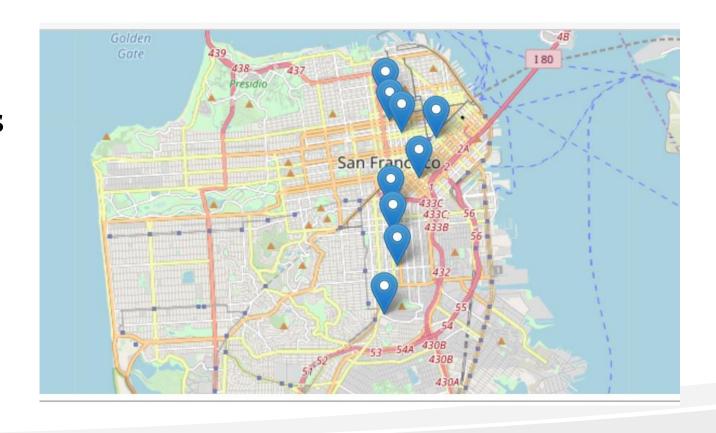


The relevant geocodes for the high risk restaurants in each neighbourhood was treated with k-means clustering to identify the optimal center points





These 9 center points reflected on the map therefore suggest the locations where the new restaurants should be opened based on existing High Risk restaurants that could potentially shut down





Next Steps

- Incorporate user ratings to the identified High-Risk restaurants subset for weighted rating
- Add population demographic and demand data to enhance the findings
- Add real-estate data and potential investments data to identify the right streets or blocks to build the new restaurants