Team Name: Chicago Eats
Team Members: Rebecca Connie, William Lennon, and Andrew Warfield
Project Deliverable #2

Project Goal:

The goal of our project is to create visual representations of the food source availability for residents in each of the Chicago ZIP codes and compare the results from 2010, 2015, and 2020. The software user will be able to choose which type(s) of food source(s) will be displayed on the interactive map as well as click on each ZIP code area to see its demographic data. For the purposes of our project, we consider food sources to be restaurants, grocery stores, and convenience stores often paired with gas stations. We use Health Department inspections records to identify all commercial food establishments in each ZIP code.

The Chicago Department of Public Health's Food Protection Program standardized procedures categorize food establishments into three risk levels. Restaurants are risk level 1 (high) and inspected twice per year. Grocery stores and convenience stores are categorized as risk level 2 (medium) or 3 (low) and inspected once per year or every other year respectively. For the best approximation of all food sources, we will take two year snapshots of data, 2010-2011, 2015-2016, and 2020-2021 to ensure each food source was inspected at least once and then use business license number as a filter to prevent duplicates within each of the three two year datasets .

In order to control for ZIP code population variation, we will utilize U.S. Census Bureau American Community Survey 5-year estimates (ZIP Code) and 1-year estimates (Citywide) and divide the quantity of food sources by the population of that ZIP code. This resulting food sources per resident calculation corresponds to a color shade on a range scale. Each ZIP code area depicted on the map will be filled in with the appropriate shade. Maps for 2010, 2015, and 2020 will be presented side by side for comparison.

Data Sources:

1. Food Inspections dataset Jan 2010 to present available on the Chicago Data Portal. Bill has downloaded this data as a 262MB .csv and Rebecca is filtering out all of the superfluous attributes, entries.
2. U.S. Census Bureau American Community Survey 5-year estimates (ZIP Code) and 1-year estimates (Citywide). Andrew is the lead for this and will compile and download by February 27th.

Major Tasks:

1. Write code necessary to acquire the Food Inspections dataset through the Chicago Data Portal API. Bill is responsible for this task and has a planned completion date of March 3rd.
2. Bash scripting to integrate all modules and run the program from command line arguments. Rebecca is responsible for this task and has a planned completion date of March 11th.
3. Create the three Chicago ZIP code maps for data visualization utilizing GeoDjango. Andrew is responsible for this task and has a planned completion date of March 9th.
4. Ensure Requirements.txt file and code to create a virtual environment for the user is integrated into command line execution of the program. Bill is responsible for this task and has a planned completion date of March 9th.