

- 1. Please provide a one-paragraph description of the goals of your project. You can list the same description from the previous deliverable or provide new details about aspects that have changed since Week 4.**

The goal of our project is to map the locations of green spaces and create a visual representation of the relationship between the availability of green spaces and community health using a composite health score as a measure of relative health across census tracts in Chicago. Based on the recent movement towards converting unused or underutilized land into parks and green spaces, we hope to use our dashboard as a tool for policymakers to identify the spaces that could most easily be converted into green spaces. So, we will also be mapping the locations of city-owned vacant land, parking lots, and low-utility spaces in Chicago.

We will build a dashboard that generates an interactive map of Chicago using Dash Leaflet, adding 3 color-coded layers for the following metrics: 1) green spaces, 2) neighborhood composite health score and 3) under-utilized city-owned land. The unique census tract GeoID, the composite health score, composite green score, and locations of under-utilized city-owned land would be displayed as text on the map when the user selects a particular census tract. In addition, when users filter for specific census tract(s), the dashboard would display the corresponding data points of all the indicators; when users select one or more of the 3 aforementioned layers, the corresponding color maps would be displayed.

- 2. For each source of data that you expect to use, please list the source of data, who will be responsible for collecting data from that source, and a date by which you expect the work of gathering the data from that source to be complete.**

### **1) General**

- Census Tract Boundaries
  - Data Source: Chicago Data Portal  
<https://data.cityofchicago.org/Facilities-Geographic-Boundaries/Boundaries-Census-Tracts-2010/5jrd-6zik>
  - Shapefiles / SODA API
- ZIP-Tract Crosswalk File
  - Data Source: HUD-USPS  
[https://www.huduser.gov/portal/datasets/usps\\_crosswalk.html#data](https://www.huduser.gov/portal/datasets/usps_crosswalk.html#data)
  - CSV

### **2) Green Spaces (Sabrina)**

- Chicago Park Boundaries
  - Data Source: Chicago Data Portal  
<https://data.cityofchicago.org/Parks-Recreation/Parks-Chicago-Park-District-Park-Boundaries-current/ej32-qgdr>
  - Shapefiles / SODA API
- Tree Canopy

- Data Source: US Forest Service <https://www.nrs.fs.fed.us/data/urban/>

### 3) Health Indicators (Yuki)

Using the Healthy Chicago 2025 four overarching indicators of wellbeing: Life expectancy; overall health status; economic well-being; mental well-being.

- **Life Expectancy** [Life expectancy] - Life expectancy at birth (average)
  - Data source: City Health Dashboard (U.S. Small-area Life Expectancy Estimates Project Data (USALEEP), NCHS)
  - CSV/API
- **Frequent Physical Distress** [Overall health status] - Physical health not good for ≥14 days during the past 30 days among adults aged ≥18 years (%)
  - Data source: City Health Dashboard (PLACES Project, CDC)
  - CSV/API
- **Diabetes** [Overall health status] - Diabetes among adults aged ≥18 years (%)
  - Data source: City Health Dashboard (PLACES Project, CDC)
  - CSV/API
- **High Blood Pressure** [Overall health status] - High blood pressure among adults aged ≥18 years (%)
  - Data source: City Health Dashboard (PLACES Project, CDC)
  - CSV/API
- **Frequent Mental Distress** [Mental well-being] - Mental health not good for ≥14 days during the past 30 days among adults aged ≥18 years (%)
  - Data source: City Health Dashboard (PLACES Project, CDC)
  - CSV/API
- **Hardship Index** [Economic well-being] - Composite score incorporating unemployment, age dependency, education, per capita income, crowded housing, and poverty into a single score
  - Data source: Chicago Health Atlas (Data for individual indicators from American Community Survey)
  - CSV

### 4) city-owned vacant land, parking lots, and low-utility spaces (Dustin)

- City land parcels
  - Data Source: Cook County Open Data & Chicago Data Portal
  - <https://datacatalog.cookcountyil.gov/Finance-Administration/Cook-County-Property-Assessments/tnes-dgyi>
  - <https://data.cityofchicago.org/Community-Economic-Development/City-Owned-Land-Inventory/aksk-kvfp>
  - Shapefiles

3. Please give a brief sketch of the work that needs to be done to complete your project (other than data collection), include a description of which team member(s) will be responsible for completing this work and the expected timeline for completion.

<b>Component</b>	<b>Member(s) responsible</b>	<b>Timeline for completion</b>
<u>Gathering data</u> <ul style="list-style-type: none"> <li>Download data in CSV form or gather data using API</li> </ul>	Dustin	<b>Sunday, Feb 27th</b>
<u>Data cleaning and wrangling</u> <ul style="list-style-type: none"> <li>Ensure that all data are cleaned and converted to a usable format (mostly Pandas dataframe)</li> <li>Combine datasets if necessary</li> </ul>	Yuki and Sabrina	<b>TBD</b>
<u>Data analysis</u> <ul style="list-style-type: none"> <li>Calculate composite health score and composite green score</li> <li>Build database using SQLite to handle what needs to be displayed based on the metrics the user has filtered on</li> </ul>	Sabrina and Yuki	<b>TBD</b>
<u>Data visualization</u> <ul style="list-style-type: none"> <li>Build dashboard and interactive map using Dash Leaflet</li> </ul>	Claire and Dustin (w/ support from Yuki & Sabrina)	<b>TBD</b>