

## Exercise: Georeferencing a Table

Georeferencing a table in CartoDB is easy to accomplish if you have the correct data in your table. The more address information that you have the better. For example, if you have the full street number and name, city, state, and zip your results will be better than if you only have a city name. The accuracy will be much higher for obvious reasons. There is a georeference link in the table view that you can click to begin geocoding your addresses or you can simply click the map view and it will automatically ask you to georeference the information.

In this exercise you will import a table containing address information for Apple retail stores in New York and georeference the addresses using CartoDB.

### Step 1: Login to CartoDB

- If necessary, go to <http://cartodb.com> and login using the account information you created.

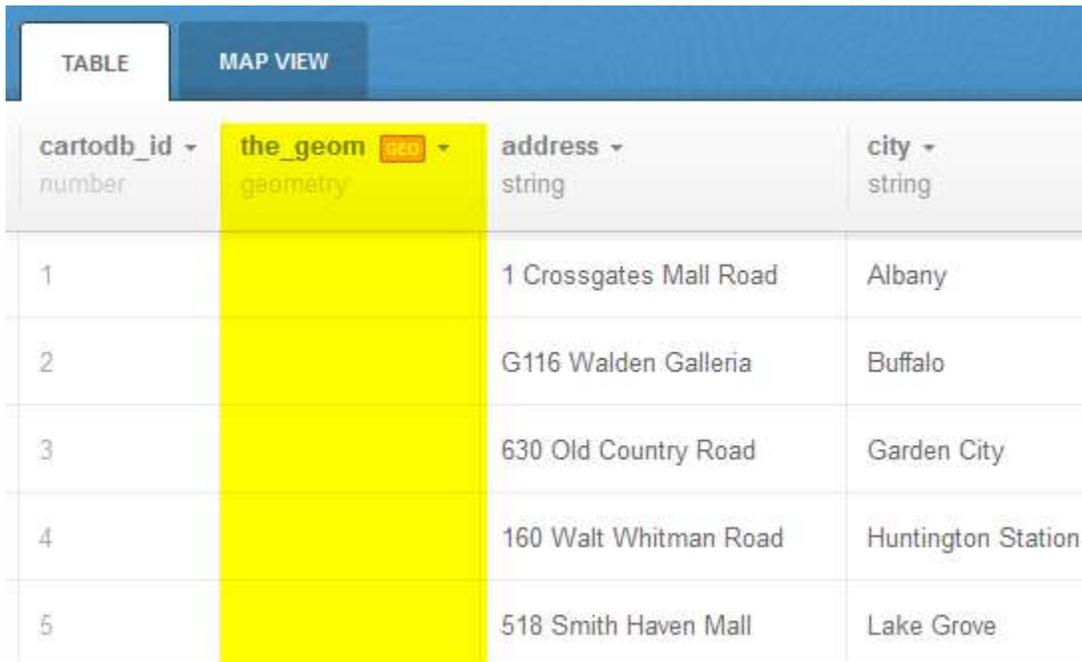
### Step 2: Import an Excel Spreadsheet

- In the C:\GeospatialTraining\CartoDB\Exercises\Data (this will differ if you're working on a Mac platform) folder you'll find a file called AppleRetailStore.xlsx. This is an Excel spreadsheet containing address information for Apple retail stores in the state of New York.
- Import this file as a table in CartoDB. Click the New Table button and select the AppleRetailStore.xlsx file.

### Step 3: Georeference the Apple retail stores

The AppleRetailStore Excel file contains address information but not the specific coordinates for each store. We'll use the CartoDB georeferencing tool to create coordinates from each address.

- Your table should appear as seen in the screenshot below. Notice the missing coordinates in the `the_geom`.



<code>cartodb_id</code> number	<code>the_geom</code> geometry	<code>address</code> string	<code>city</code> string
1		1 Crossgates Mall Road	Albany
2		G116 Walden Galleria	Buffalo
3		630 Old Country Road	Garden City
4		160 Walt Whitman Road	Huntington Station
5		518 Smith Haven Mall	Lake Grove

- Click Options → Georeference to begin the process of geocoding the addresses. You should see a dialog like the one in the screenshot below.

**Georeference your table**

I have lon/lat columns in my table

Lon

Lat

I have one or more columns with the address

**Georeference**

- Click 'I have one or more columns with the address'

- This table contains separate columns for the address, city, state, and zip. You'll want to enter this information inside curly braces for each field as seen in the screenshot below.

**Georeference your table**

I have lon/lat columns in my table

I have one or more columns with the address

Specify columns to use for geocoding by adding them within brackets.

**HINT** You can add also extra text to make geocoding more accurate  
(eg. {school}, New York, USA)

**Georeference**

- Click Georeference

#### Step 4: Examine the Results

- The geocoding process will add coordinates to the `_geom` for each record containing an address. You can see that in the screenshot below.

TABLE			MAP VIEW		
<code>cartodb_id</code> number	<code>the_geom</code> geometry	<code>address</code> string	<code>cartodb_id</code> number	<code>the_geom</code> geometry	<code>address</code> string
1	-73.84822, 42.68832	1 Crossgates Mall Road	1	-73.84822, 42.68832	1 Crossgates Mall Road
2	-78.76197, 42.90943	G116 Walden Galleria	2	-78.76197, 42.90943	G116 Walden Galleria
3	-73.6507, 40.73696	630 Old Country Road	3	-73.6507, 40.73696	630 Old Country Road
4	-73.412258, 40.822352	160 Walt Whitman Road	4	-73.412258, 40.822352	160 Walt Whitman Road
5	-73.12958, 40.86768	518 Smith Haven Mall	5	-73.12958, 40.86768	518 Smith Haven Mall
6	-73.676464, 40.795547	1900 Northern Boulevard	6	-73.676464, 40.795547	1900 Northern Boulevard

- Click the Map View tab to see the results seen in the screenshot below. You may need to pan and zoom to get a closer view of the data.

