What's new in GIS?

Randall Young, Geographer
What's the same old same old?

You still need data.

It still takes time and knowledge to use GIS.
Q: What data do you need?
A: *Spatial* data.

- County identifiers
- ZIP codes
- Street addresses
- Latitude/Longitude coordinates
- Census tracts

https://www.accessdata.fda.gov/scripts/oce/inspections/oce_insp_searching.cfm
### Spatial data!

<table>
<thead>
<tr>
<th>Street Address</th>
<th>City</th>
<th>State</th>
<th>Zip</th>
<th>Decision Type</th>
<th>Minor Involved</th>
<th>Sale to Minor</th>
<th>Decision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>211-01 JAMAICA AVE</td>
<td>QUEENS VILLAGE</td>
<td>NY</td>
<td>11428</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>212 15 JAMAICA AVENU</td>
<td>QUEENS VILLAGE</td>
<td>NY</td>
<td>11428</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>219 28 HILLSIDE AVE</td>
<td>QUEENS VILLAGE</td>
<td>NY</td>
<td>11427</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>197?02 HILLSIDE AVE</td>
<td>QUEENS</td>
<td>NY</td>
<td>11423</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>90?39 SPRINGFIELD BOULE</td>
<td>QUEENS VILLAGE</td>
<td>NY</td>
<td>11428</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>21917 HILLSIDE AVE</td>
<td>QUEENS VILLAGE</td>
<td>NY</td>
<td>11427</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>21701 JAMAICA AVE</td>
<td>QUEENS VILLAGE</td>
<td>NY</td>
<td>11428</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
<tr>
<td>184?27 JAMAICA AVE</td>
<td>QUEENS</td>
<td>NY</td>
<td>11423</td>
<td>No Violations Observed</td>
<td>Yes</td>
<td>No</td>
<td>6/30/2017</td>
</tr>
</tbody>
</table>
Geocoding
What's the same old same old?

- Census data
- FIPS codes
- JOIN operation

<table>
<thead>
<tr>
<th>STATEFP10</th>
<th>COUNTYFP10</th>
<th>TRACTCE10</th>
<th>GEOID10</th>
<th>NAME10</th>
<th>NAMELSAD10</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>015</td>
<td>821300</td>
<td>25015821300</td>
<td>8213</td>
<td>Census Tract 8213</td>
</tr>
<tr>
<td>25</td>
<td>015</td>
<td>821100</td>
<td>25015821100</td>
<td>8211</td>
<td>Census Tract 8211</td>
</tr>
<tr>
<td>25</td>
<td>015</td>
<td>822401</td>
<td>25015822401</td>
<td>8224.01</td>
<td>Census Tract 8224.01</td>
</tr>
<tr>
<td>25</td>
<td>015</td>
<td>822300</td>
<td>25015822300</td>
<td>8223</td>
<td>Census Tract 8223</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>812002</td>
<td>25013812002</td>
<td>8120.02</td>
<td>Census Tract 8120.02</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>812001</td>
<td>25013812001</td>
<td>8120.01</td>
<td>Census Tract 8120.01</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>812104</td>
<td>25013812104</td>
<td>8121.04</td>
<td>Census Tract 8121.04</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>812101</td>
<td>25013812101</td>
<td>8121.01</td>
<td>Census Tract 8121.01</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>811900</td>
<td>25013811900</td>
<td>8119</td>
<td>Census Tract 8119</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>811800</td>
<td>25013811800</td>
<td>8118</td>
<td>Census Tract 8118</td>
</tr>
<tr>
<td>25</td>
<td>013</td>
<td>811700</td>
<td>25013811700</td>
<td>8117</td>
<td>Census Tract 8117</td>
</tr>
</tbody>
</table>
ArcGIS (ESRI) is still the most often used GIS on the market.  www.esri.com
What's new in GIS?

ESRI has introduced many new products

There are some great products not made by ESRI.
Pro is a new part of Desktop

ArcMap continues!
ArcMap and Pro run side by side
By Deadly Design: The Tobacco Industry in Your Neighborhood

Philadelphia has the highest adult smoking rate of the ten largest cities. In the United States, about 17% of adults smoke, but in Philadelphia it's about 23%. That's almost 1 in 4 Philadelphians lighting up. Every year in Philadelphia, smoking is responsible for the deaths of more than 2,000 people or about 53 SEPTA buses full. The large number of tobacco retailers helps to drive these numbers. Philadelphia has almost twice as many tobacco retailers per capita as other major cities.
Montana Tobacco Retailer Mapper

Point of Sale

Most tobacco products are bought in convenience stores, gas stations and grocery stores where the industry focuses the majority of its marketing efforts. Point-of-sale strategies can reduce exposure to tobacco products and advertising in stores as detailed in the following sections:

1. Implement Prevention & Cessation
   - Messaging
   - Restrict Point-of-Sale Advertising
   - Restrict Product Placement
2. Prohibit the Sale of Flavored Products

STORY MAP TEMPLATES

- A Sequence of Place-enabled Photos or Videos
- A Rich Multimedia Narrative
- Presenting a Series of Maps
- A Dynamic Collection of Crowdsourced Photos
- A Curated Set of Places of Interest
- Comparing Two Maps

https://storymaps.arcgis.com/en/app-list/
An alternative to ESRI Story Maps

https://storymap.knightlab.com/

QGIS

A Free and Open Source Geographic Information System

QGIS 2.18 Las Palmas has been released

QGIS 2.18 Released
Get it ... download QGIS 2.18 Las Palmas or read what is new in the: Visual Changelog

WWW.QGIS.ORG
The Most Epic GIS Software Battle in GIS History

A head-to-head GIS software showdown with a GIS star-studded lineup

http://gisgeography.com/qgis-arcgis-differences/
http://monde-geospatial.com/arcgis-vs-qgis-10-most-important-differences-between-arcgis-and-qgis/
QGIS demo
Compliance Check Inspections of Tobacco Product Retailers (through 06/30/2017)

Data for July and August inspection decisions will be available on 09/11/2017

https://www.accessdata.fda.gov/scripts/oce/inspections/oce.inspect_searching.cfm
qgis2web plugin

Leaflet

an open-source JavaScript library
for mobile-friendly interactive maps

Overview Tutorials Docs Download Plugins Blog

http://leafletjs.com/
Output from qgis2web plugin

Total space ~ 1 Mb
Overview of the process

1. Downloaded the data from the FDA website (CSV format).
2. Geocoded the address list using the Centrus geocoder (Pitney Bowes).
3. Converted LATITUDE/LONGITUDE coordinates into a point layer (shapefile).
4. Added base layers such as states, Mexico etc. to QGIS.
5. Symbolized all the layers to my liking.
6. Got rid of some extemporaneous fields.
7. Ran the Create Web Map tool in QGIS.
8. Tweaked some of the javascript code.
Need ideas?

https://www.cdc.gov/dhdsp/maps/gisx/index.html

Chronic Disease GIS Exchange

Map Gallery

View an evolving series of maps designed to address chronic diseases, and submit your own map to the gallery.

GIS Resources

Explore an expansive set of GIS resources, blogs, tools, online mapping websites, and more.

GIS Training

Tutorials designed for novice to advanced GIS users working in chronic disease.
Thank you!

Questions?