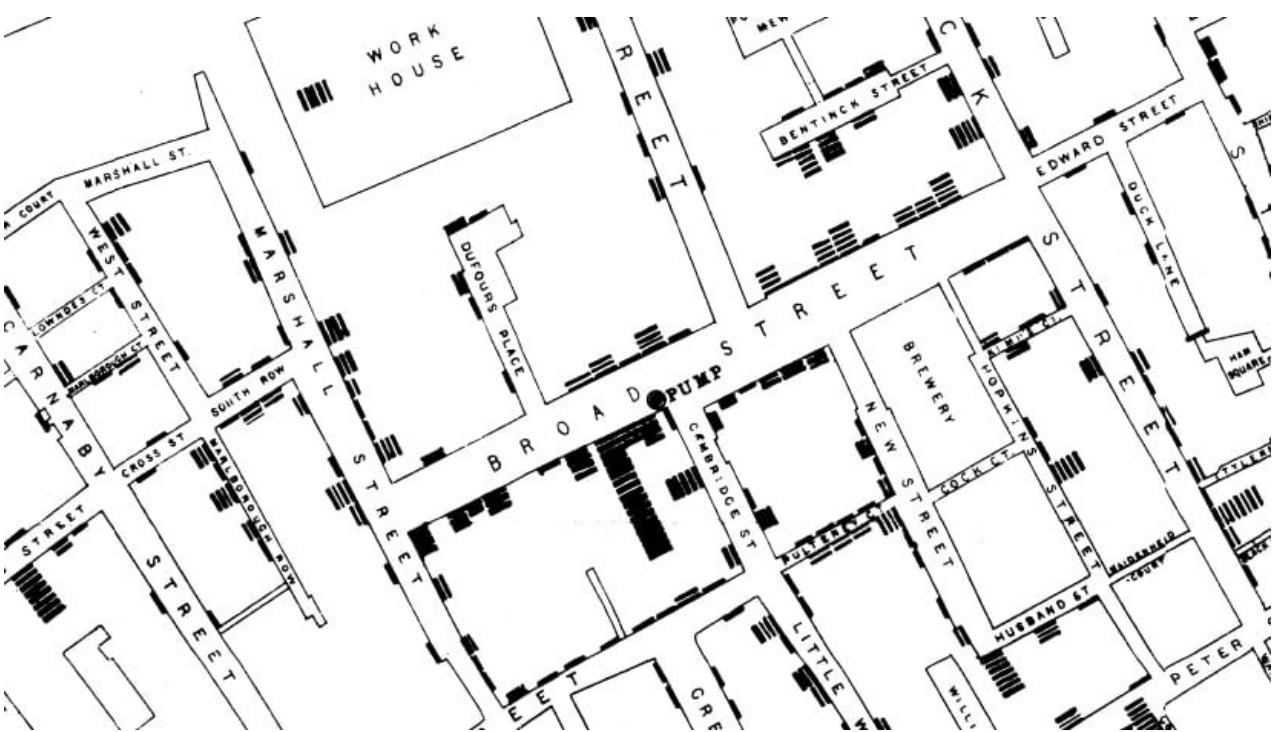
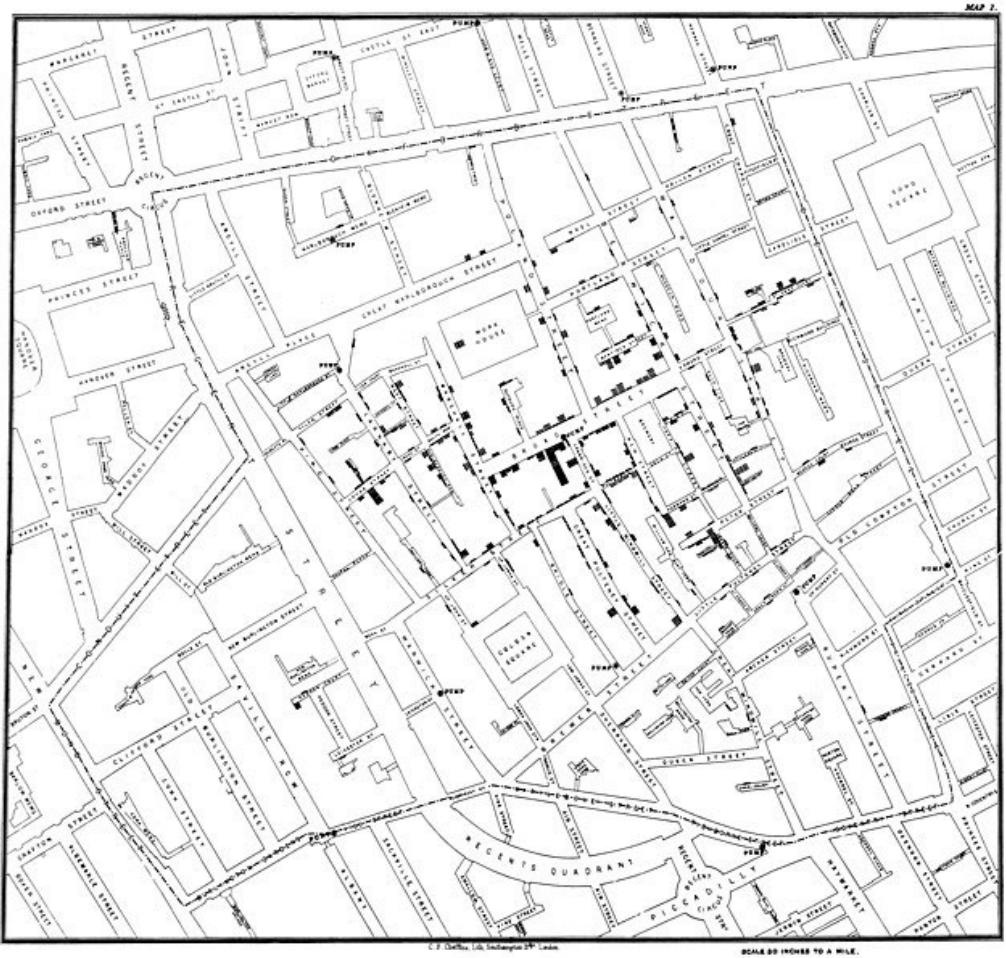


Effective Visualization II

Lab 5

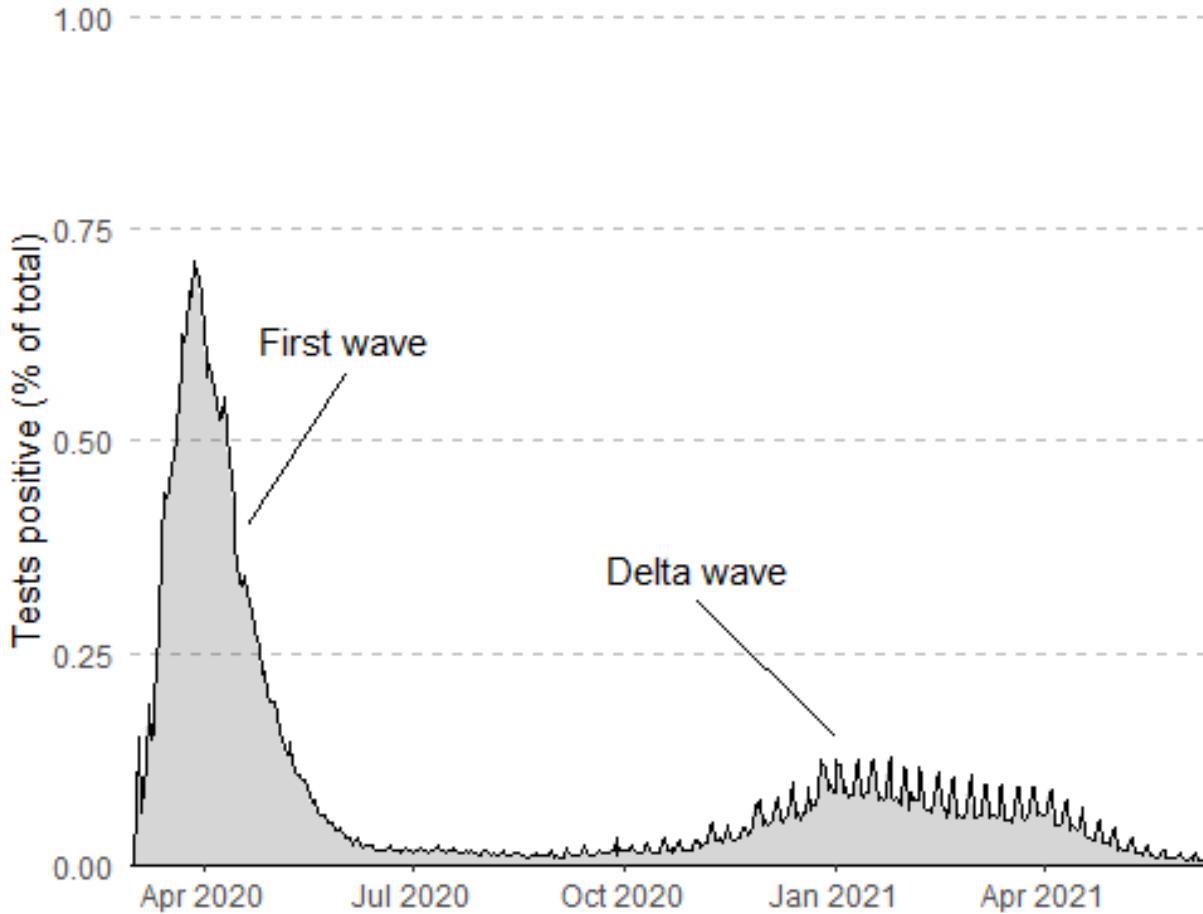


John Snow ~1854

Agenda

- Raster & vector images, image resolution
- Thinking about maps and where to get them
- exporting figures from R
- ggmap intro
- other map sources, shapefiles

NYC COVID case rates



NYC COVID case rates

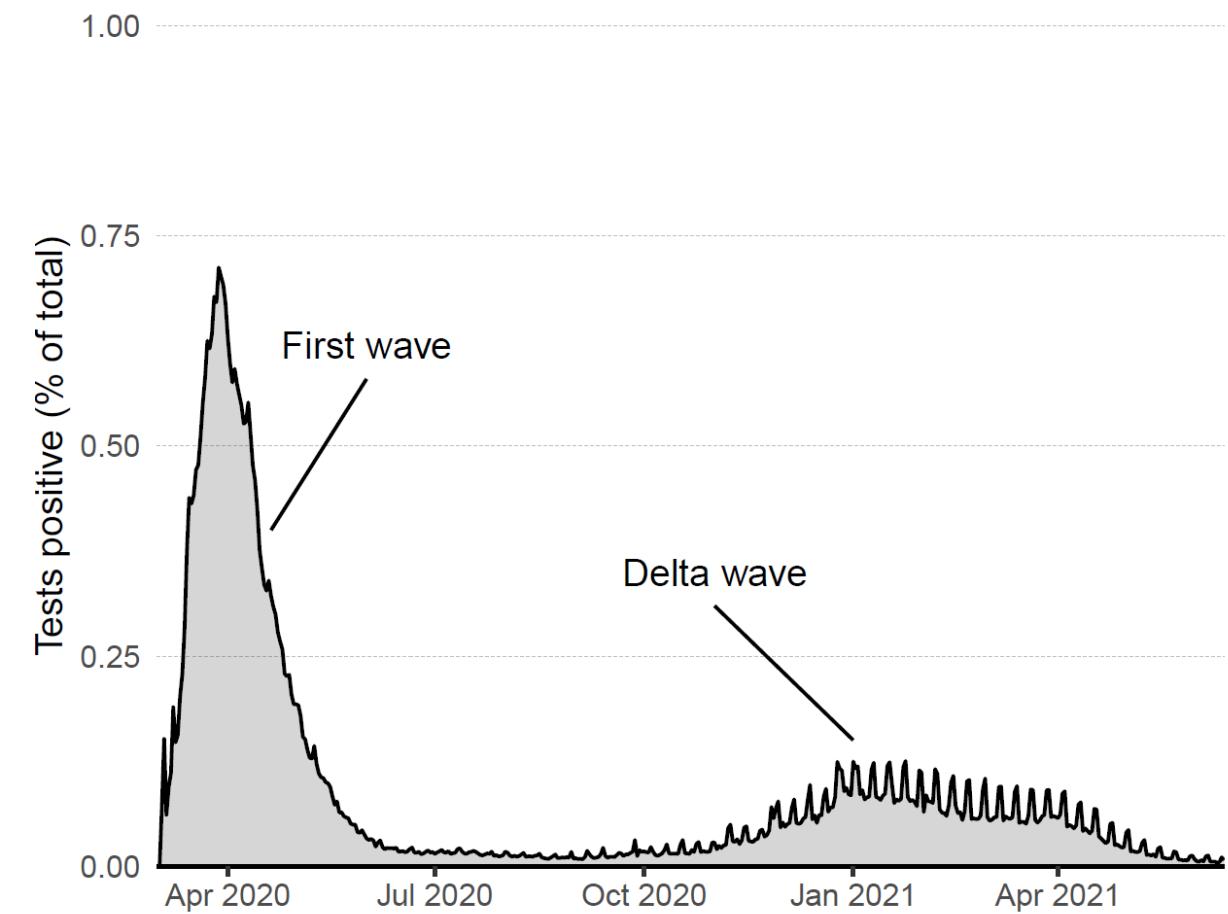
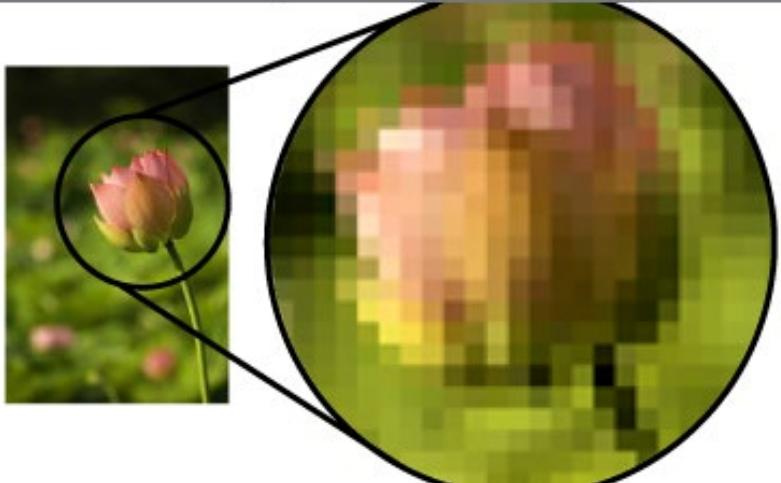
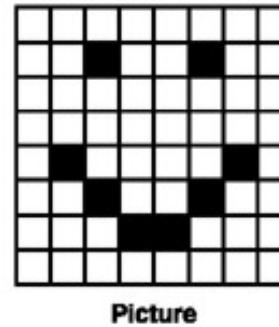
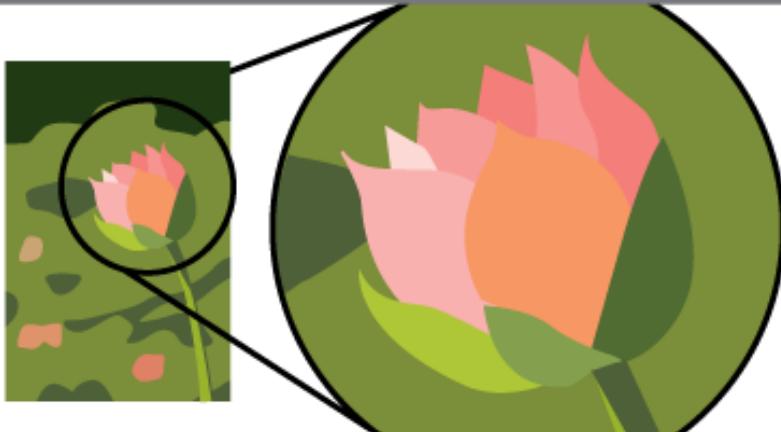


Image formats

graphic made of pixels



graphic made of vector objects



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Bitmap

Raster

.bmp

.png

.jpg

.tiff

Vector

.svg

.eps

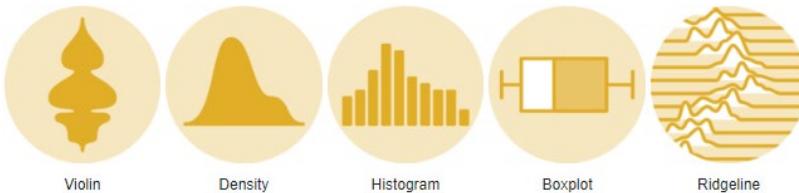
.pdf

Image editing software

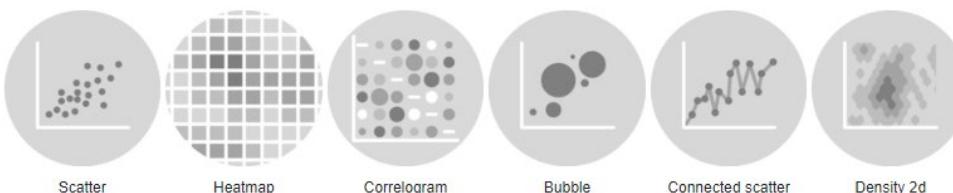
| | Platform | Price model |
|-----------------------------------|--------------|-----------------------------|
| Raster images | | |
| Adobe Photoshop | Windows, Mac | Two limbs |
| GIMP | Windows, Mac | Free |
| Vector Images | | |
| Adobe Illustrator | Windows, Mac | Your first-born child |
| Affinity Designer | Windows, Mac | \$70 one-time |
| Inkscape | Windows, Mac | Free |
| Figma (?) | Web-based | Free (with upgrades for \$) |
| Canva (?) | Web-based | Free (with upgrades for \$) |

R graph gallery

Distribution



Correlation



Ranking



R graph gallery





Rihanna @rihanna



devastating. 😢 #Australia



347K 2:49 AM - Jan 7, 2020



79.3K people are talking about this



anthony_hearsey • Follow

...

Regarding False Information. This has occurred NOT because of this post, or my information being inaccurate. It has been Zucc'd because other people have shared this image with the caption "This is a NASA photograph". This image has been flagged as a result. Update - this is now being corrected, finally. Should be clear in a day or so... This is a 3D visualisation of the hotspots in Australia. NOT A PHOTO. Think of this as a graph. Also note this was created as an art piece

This is made from data from NASA's FIRMS (Satellite data regarding fires) between 05/12/19 - 05/01/20. These are all the areas which have been affected by bushfires.

<https://irms.modaps.eosdis.nasa.gov/>



27,469 likes

JANUARY 8

Add a comment...

Post





**VERIZON 4G LTE COVERS
OVER 96% OF AMERICANS**

Verizon's 4G LTE service is available to more than 303 million people across 500 markets in the



*AT&T now covers more than
99% of all Americans.*



Claim based on coverage in U.S. licensed and roaming areas. Map displays approximate coverage.
Compatible device required. Coverage not available everywhere.



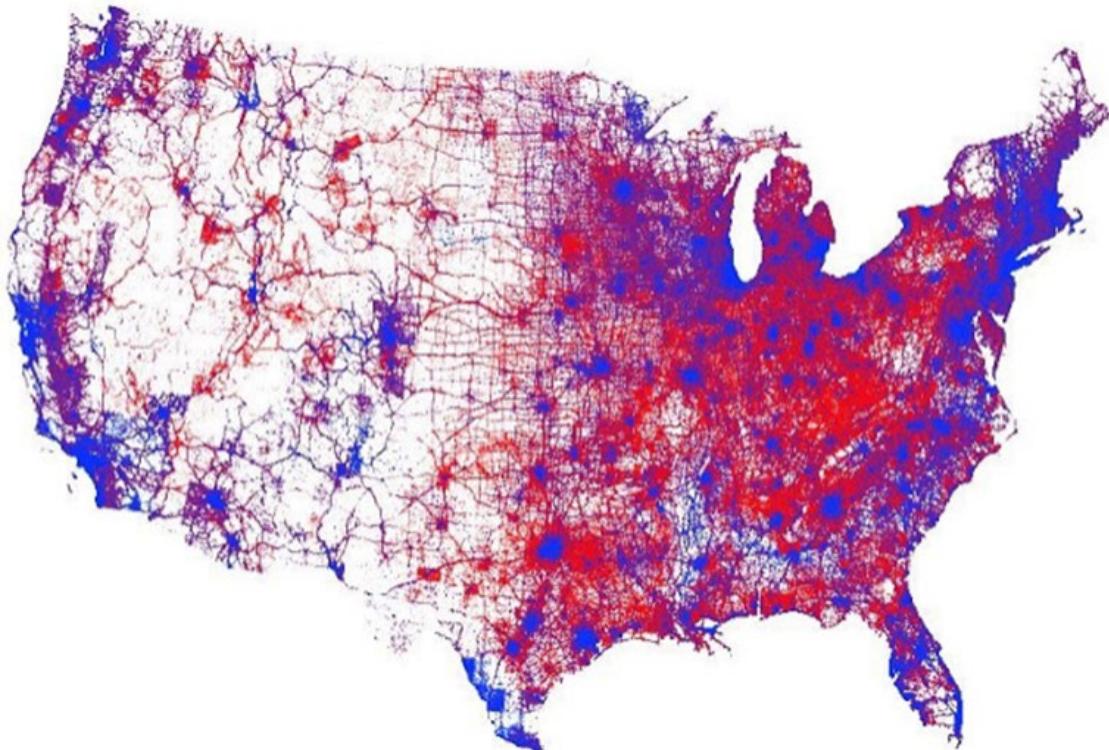
SPRINT 4G LTE COV

Based on indoor and outdoor
January-June, 2013. Maps bas



Donald J. Trump

@realDonaldTrump



12:05 PM · Oct 1, 2019 · Twitter for iPhone

62.2K Retweets 235.6K Likes

[First Draft News examples of reality-distorting maps](#)

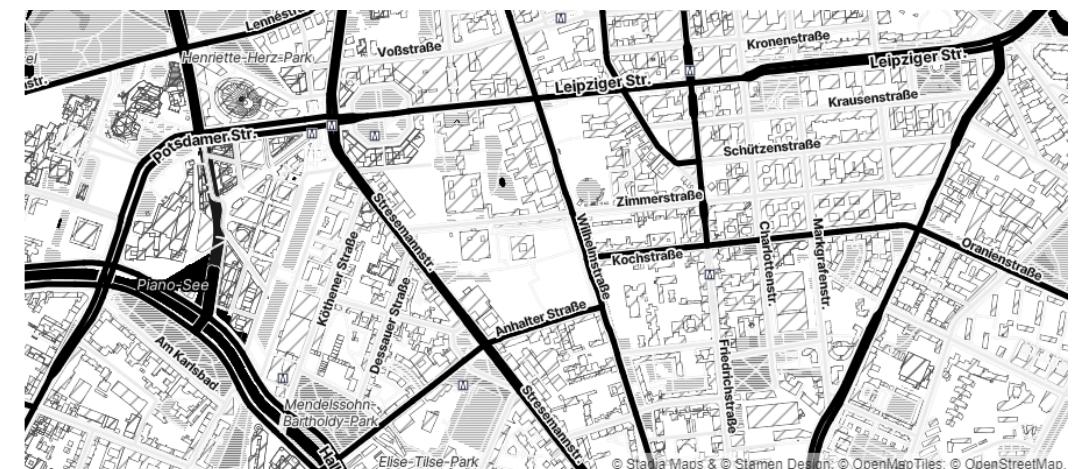
How to link this to a map?

| AGE_GROUP | PERP_SEX | PERP_RACE | X_COORD_CD | Y_COORD_CD | Latitude | Longitude |
|-----------|----------|----------------|------------|------------|----------|-----------|
| 18-24 | M | BLACK | 1057636 | 203954 | 40.72619 | -73.73523 |
| 25-44 | M | BLACK | 1014340 | 171320 | 40.63687 | -73.89159 |
| 25-44 | M | WHITE | 995244 | 155739 | 40.59415 | -73.96041 |
| 18-24 | M | BLACK | 1009058 | 239616 | 40.82434 | -73.91037 |
| 25-44 | M | BLACK | 1005169 | 246667 | 40.84370 | -73.92440 |
| 25-44 | M | BLACK | 989013 | 192652 | 40.69547 | -73.98283 |
| 18-24 | M | WHITE HISPANIC | 1028607 | 187930 | 40.68240 | -73.84007 |
| 25-44 | M | WHITE HISPANIC | 1013232 | 236725 | 40.81639 | -73.89530 |
| 25-44 | M | BLACK | 1057636 | 203954 | 40.72619 | -73.73523 |
| 25-44 | M | BLACK | 1004347 | 220853 | 40.77285 | -73.92744 |
| 25-44 | M | WHITE HISPANIC | 1000555 | 230994 | 40.80069 | -73.94111 |

Need:

- Dataset with map coordinates (columns)
- Map source (have to outsource this)

Stadia Maps



Where to find shapefiles/map data

- [Emory University list](#)
- [RT Wilson's blog](#)
- Google e.g.
“Tennessee shapefile”

