Tips and Tricks for Working with Demographic Data
Today’s Speakers

Holly Orr
Customer Success Manager

Alex Roth
Solutions Engineer
What you’ll learn today...

How the Data Observatory eases access to demographic data.

How to use CARTOframes to get demographic data from the DO.

How to use the CARTO platform to work with demographic data insights.
What we assume you’re familiar with...

Census Data

Python

CARTO

At least generally...
Demographics is defined as statistical data about the characteristics of a population, such as the age, gender and income of the people within the population.

When the census assembles data about people's ages and genders, this is an example of assembling information about demographics.
Search - Use the options on the left (topics, geographies, ...) to narrow your search results

To search for tables and other files in American FactFinder:

1. Enter search terms and an optional geography and click GO

```
<table>
<thead>
<tr>
<th>topic or table name</th>
<th>state, county or place (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```

-- or --

Select from Topics, Race and Ethnic Groups, Industry Codes, EEO Occupation Codes.

- these are added to 'Your Selections'
- the Search Results are updated

2. Next, select Geographies (states, counties, cities, towns, etc.)

- these are added to 'Your Selections'
- the Search Results are updated

3. Select one or more Search Results and click View
TIGER/Line® Shapefiles and TIGER/Line® Files

- Format:
  - Shapefile - 2007 to Present
  - TIGER/Line ASCII format - 2006 and earlier
  - Census 2000 available in both formats

- The core TIGER/Line Files and Shapefiles do not include demographic data, but they do contain geographic entity codes (GEOIDs) that can be linked to the Census Bureau's demographic data, available on American FactFinder.

- How Do I Choose Which Version to Use? [PDF]

- Note on Special Characters Not Displaying Correctly.

- Working with TIGER/Line Shapefiles How-To Guides

- Geography Change & Errata
  - Geographic Boundary Change Notes
  - Geography Notes and Errata from the 2010 Census [PDF]
  - Substantial County Changes

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2018 TIGER/Line Shapefiles
All legal boundaries and names are as of January 1, 2018. Released September 28, 2018.

Download
Multiple Steps

- Search
- Clean
- Shapefile
- Join
What we realized is that we need an easier way to incorporate demographic data in the CARTO platform.
Data Observatory

https://cartodb.github.io/bigmetadatadata/index.html
What is CARTOframes and why should I care?

- Created out of an internal need on our data science team
- Saves time: integrates CARTO maps, data, analysis into Python workflows
- Plays nicely with Python data science ecosystem: pandas, matplotlib, geopandas, Jupyter
- Supports iterative and reproducible workflows
In computer science, syntactic sugar is syntax within a programming language that is designed to make things easier to read or to express.

It makes the language "sweeter" for human use: things can be expressed more clearly, more concisely, or in an alternative style that some may prefer.
IDE: Integrated Development Environment

Project Jupyter's operating philosophy is to support interactive data science and scientific computing across all programming languages via the development of open-source software.
Presentation

https://colab.research.google.com/drive/1nGkqClCdNjshOCS9yGABHMUbl1uIhTcA
Enrichment

Data Observatory
Augment any data with demographic data from around the globe with ease

Data Services API
Routing & Traffic
Geocoding
Create locations from addresses and understand travel time all from within CARTO

ETL
Develop robust ETL processes and update mechanisms so your data is always enriched

Mastercard
Human Mobility
POI
Premium data to understand and analyze deeper trends and behavior
Using CARTO's APIs and SDKs, connect your analysis into the places that matter most for you and your team.
How can we help?

Find anything (like import data, legends, or reset password)

Popular topics: Support FAQs, Preparing Data, Understanding Map Layers

Getting Started
Welcome to CARTO. It's time to learn and explore. Let's get started!

Building Maps
From Builder to CARTO.js - learn how to build maps & apps from top to bottom.
Useful Documentation Links:

Data Observatory Catalog
https://cartodb.github.io/bigmetadatadata/index

Developers Center: Data Observatory
https://carto.com/developers/data-observatory/

Developers Center: DO + CARTOframes
https://carto.com/developers/cartoframes/guides/Data-Observatory/

CARTOframes Latest Documents
https://cartoframes.readthedocs.io/en/latest/

CARTOframes Github
Related Webinars:

Best Practices for Spatial Data Science using CARTO and Python
By Andy Eschbacher and Joe Pringle
https://go.carto.com/spatial-data-science-carto-python-webinar-recorded

Popular PostGIS Workflows to Improve Spatial Problem-Solving
By Matt Forest and Peter Murray
https://go.carto.com/postgis-workflows-spatial-problem-solving-webinar-recorded

Evaluate Real Estate investments in opportunity zones with location data
By Sébastien Burgess and Leo Mackey
https://go.carto.com/investments-opportunity-zones-webinar-recorded
Thanks for listening!
Any questions?

Request a demo at CARTO.COM

Holly Orr
Customer Success Manager // holly@carto.com

Alex Roth
Solutions Engineer // aroth@carto.com