

# Linguistic Demographics in the United States

K. Wang, M. Kuhn, N. Dieck | 1.13.2020

# Introduction

- 290 million Americans over 5 in 2013 according to the US Census
- 60 million speak a language other than English at home
- The Census tracks 380 languages spoken in the US
  - From Afrikaans to Zuni
- What can the Census tell us about non-English speaking households in the US?

# Research Questions

- What languages are spoken here in Cook County?
- “Deep Dive” for French, Chinese and Spanish
  - Where do speakers of these languages congregate?
  - How many are there in various US metropolitan areas?
- Do speakers of foreign languages tend to aggregate in larger metropolitan areas?

# Census Methodology

- Sample populations are surveyed to predict the total number of speakers in the statistical area
- Three statistical levels / areas in the US -
  - United States
  - Each of 50 states plus DC and Puerto Rico
  - 155 counties covering 100 metropolitan areas in 37 states
- Research Question: Do you speak English at home?
  - If not, what do you speak?
- Response as respondent gave it: Chinese ≠ Mandarin
- Coded into one of 380 language categories

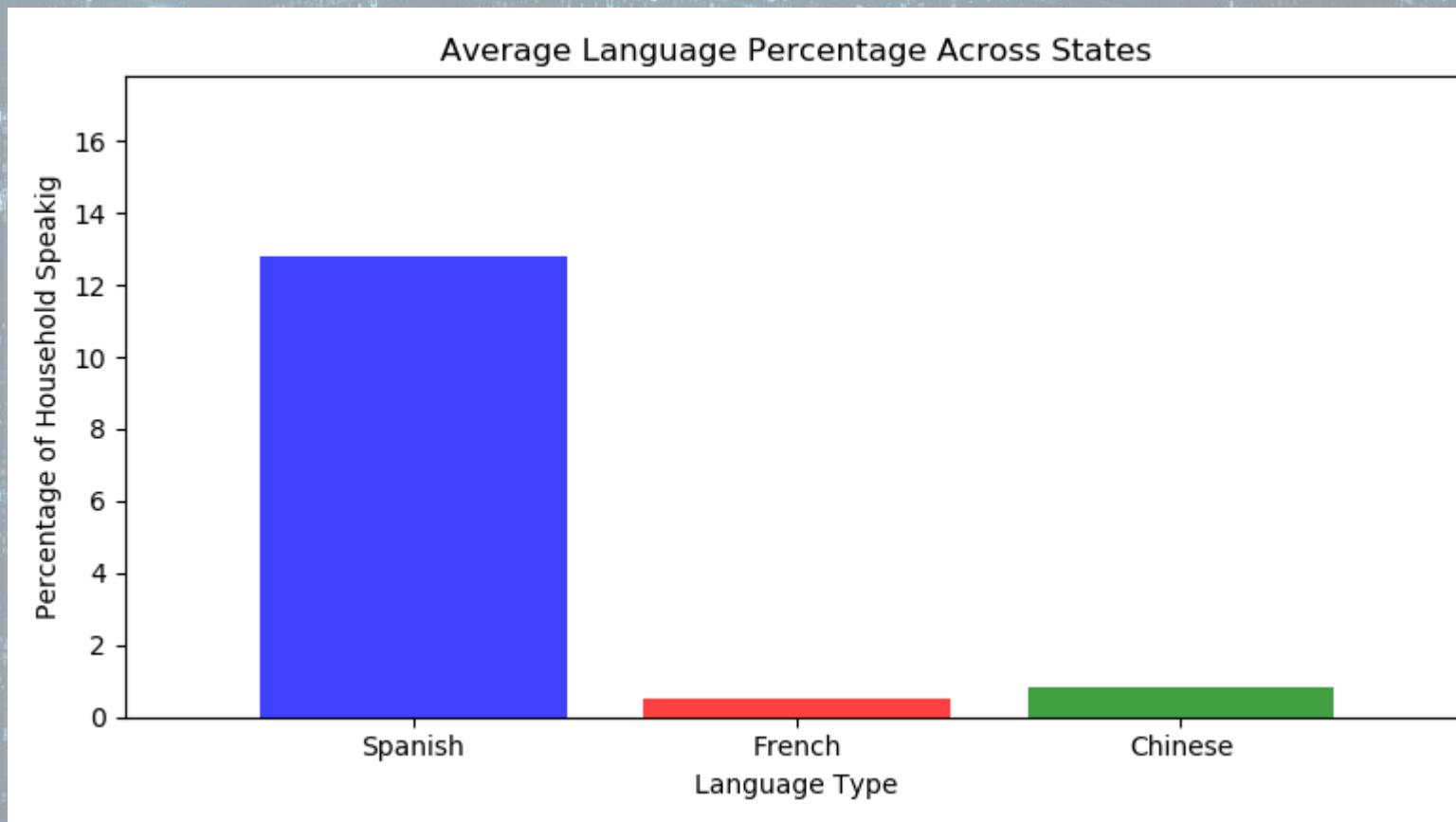
# Data Collection Process

- US Census data accessible via API request
  - Detailed Languages Spoken at Home and Ability to Speak English for the Population 5 Years and Over
- Data drawn from the 2013 American Community Survey
- County-level data were analyzed for all research questions
- Automation used to download applicable data
  - Number of French, Spanish and Chinese speakers for all counties in the survey
  - Number of speakers of all surveyed languages located in Cook County

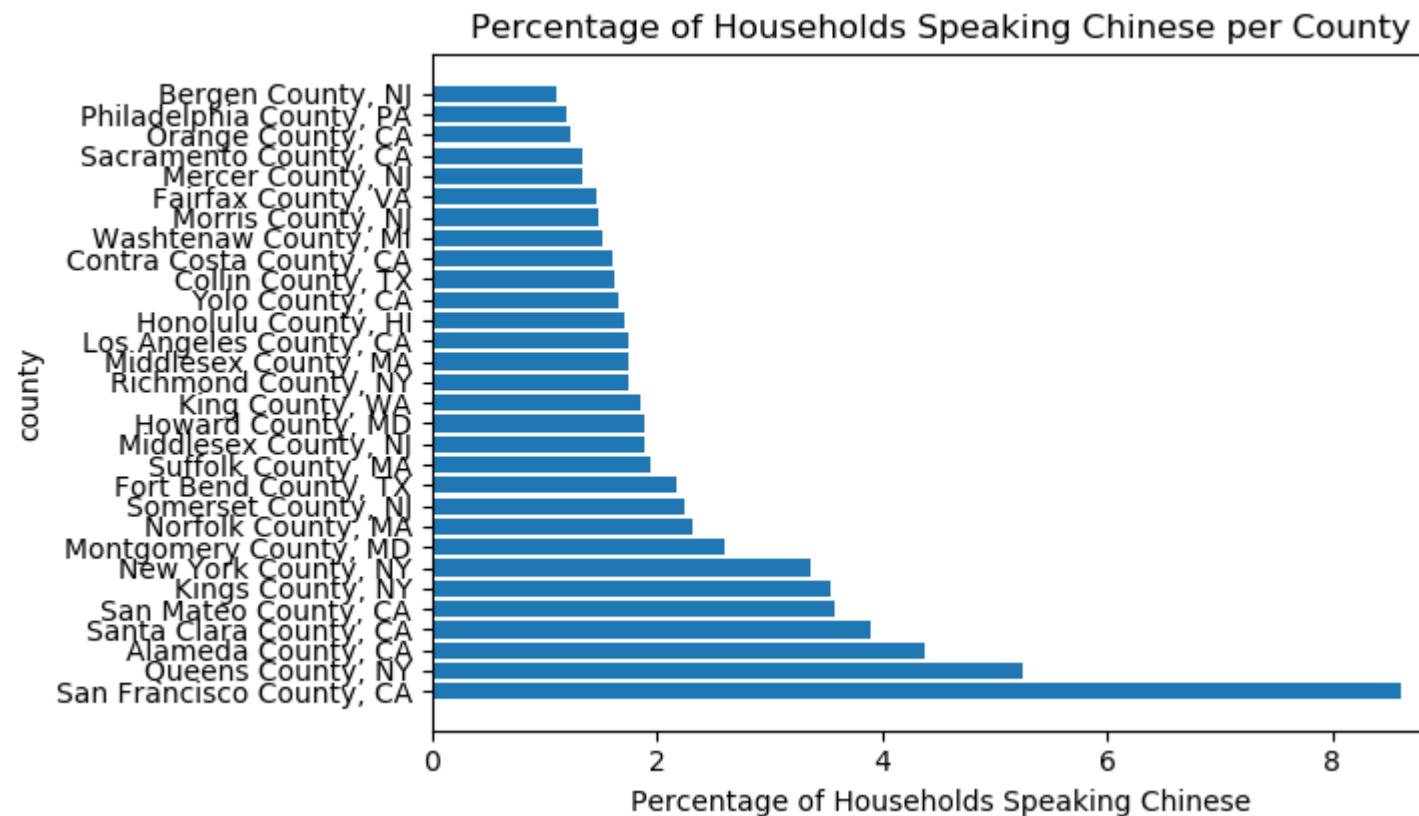
# Totals for Surveyed Languages

- API requests yielded total population sizes and percentages speaking the 380 languages
- Three languages were selected for “deep dives” – Chinese, French, and Spanish
- Level of analysis is the 155 counties
- Overall findings were:
  - Chinese: 0.84% of the surveyed population
  - French: 0.49% of the surveyed population
  - Spanish: 12.79% of the surveyed population.

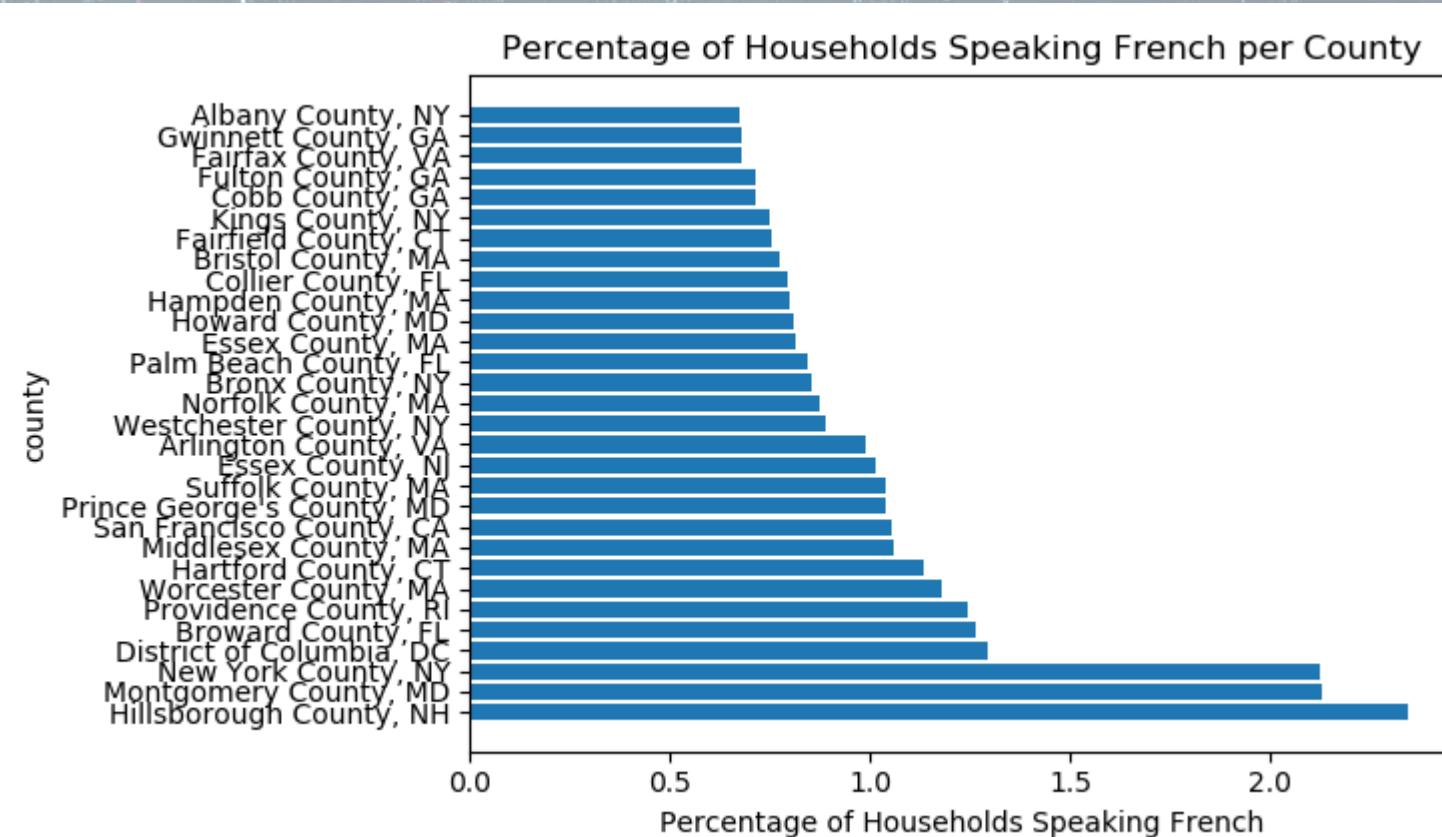
# Totals for Surveyed Languages



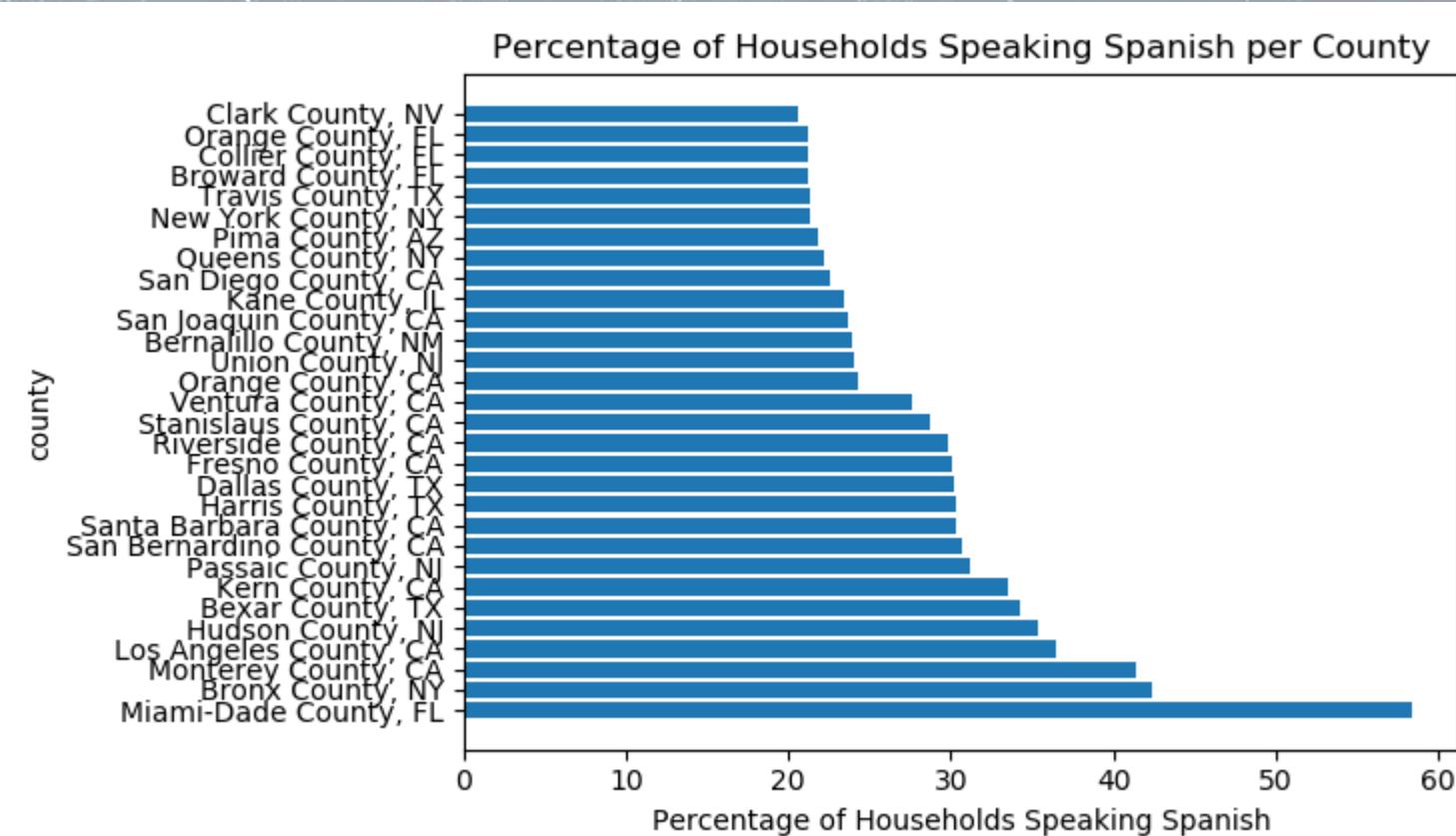
# Totals for Surveyed Languages



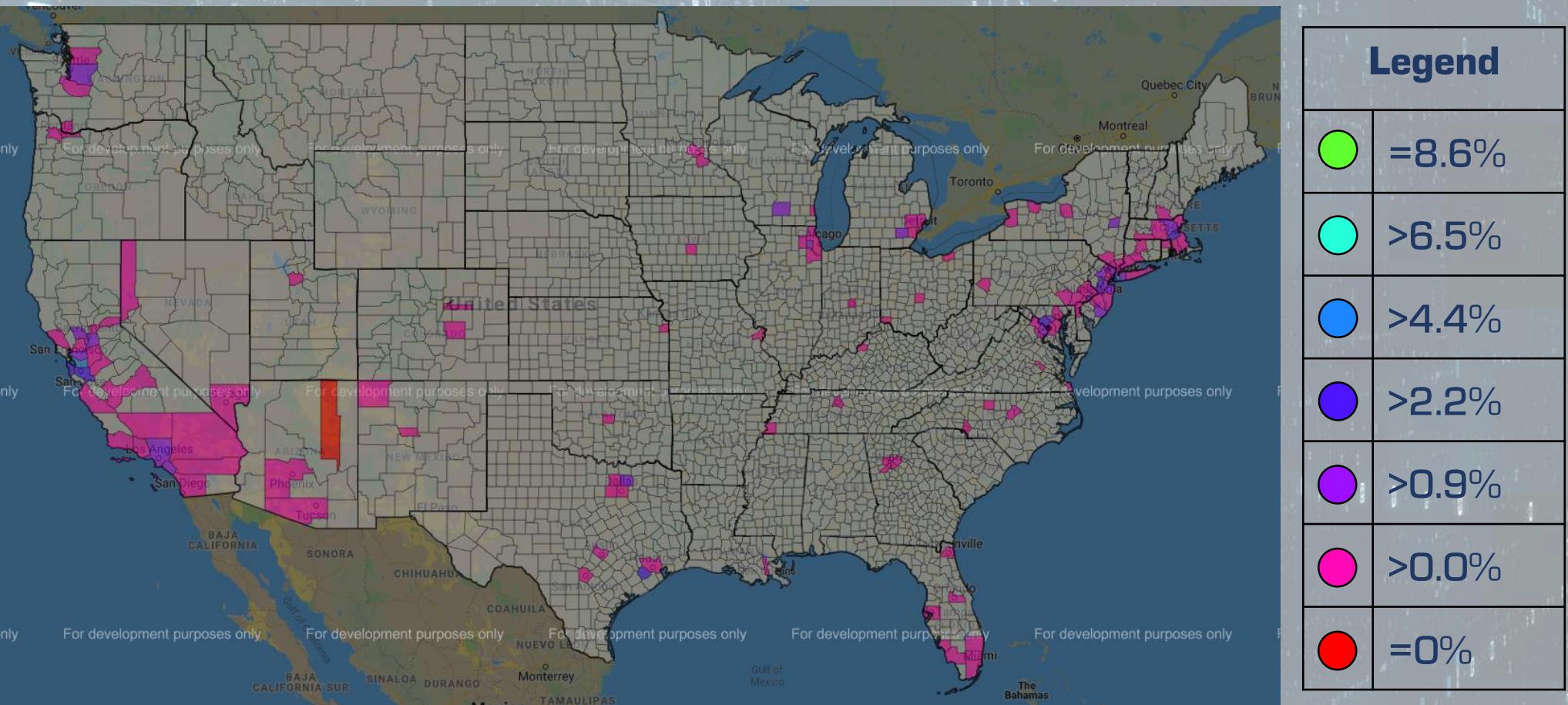
# Totals for Surveyed Languages



# Totals for Surveyed Languages



# Distribution of Chinese Speakers



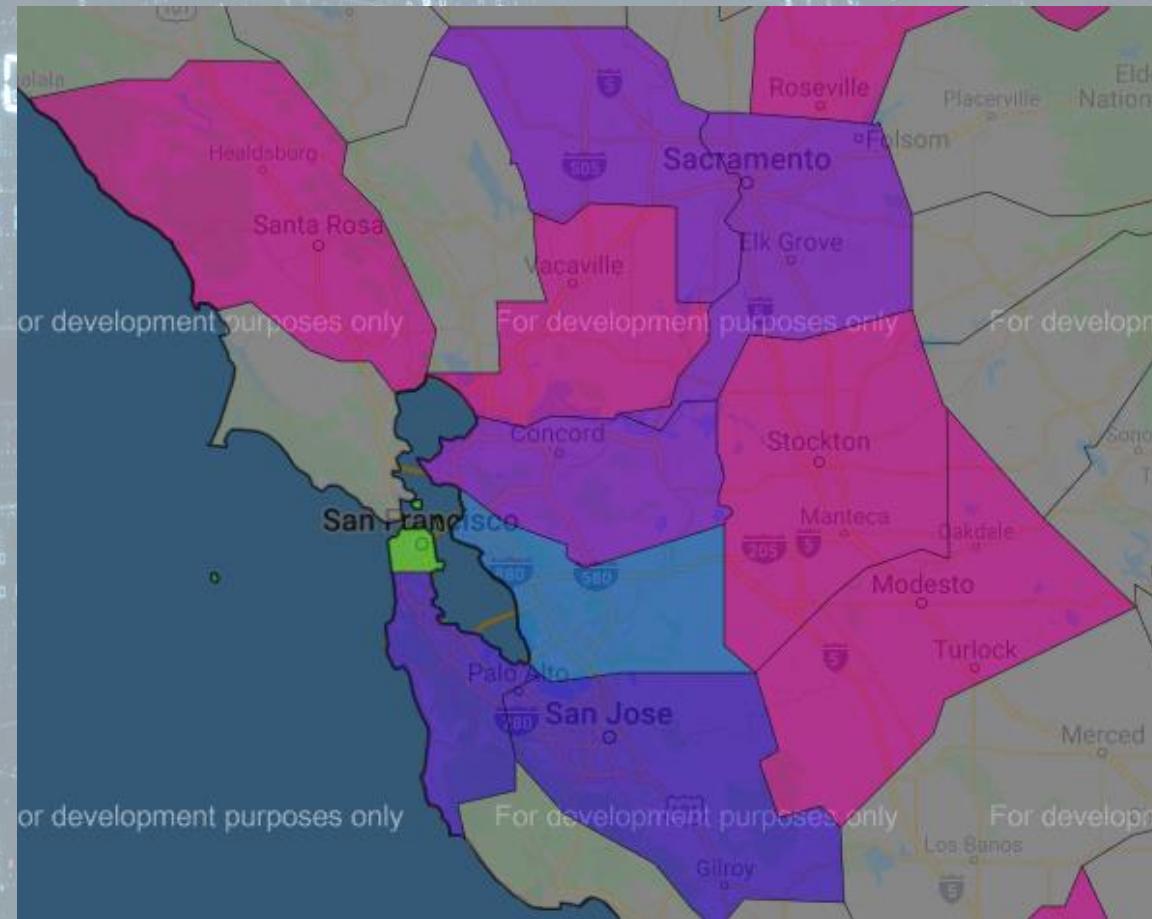
# Distribution of Chinese Speakers

## San Francisco County

- Population: 837,442
- % Chinese Speaking: 8.6%
- # of Chinese Speakers: 72,135

## Next Up:

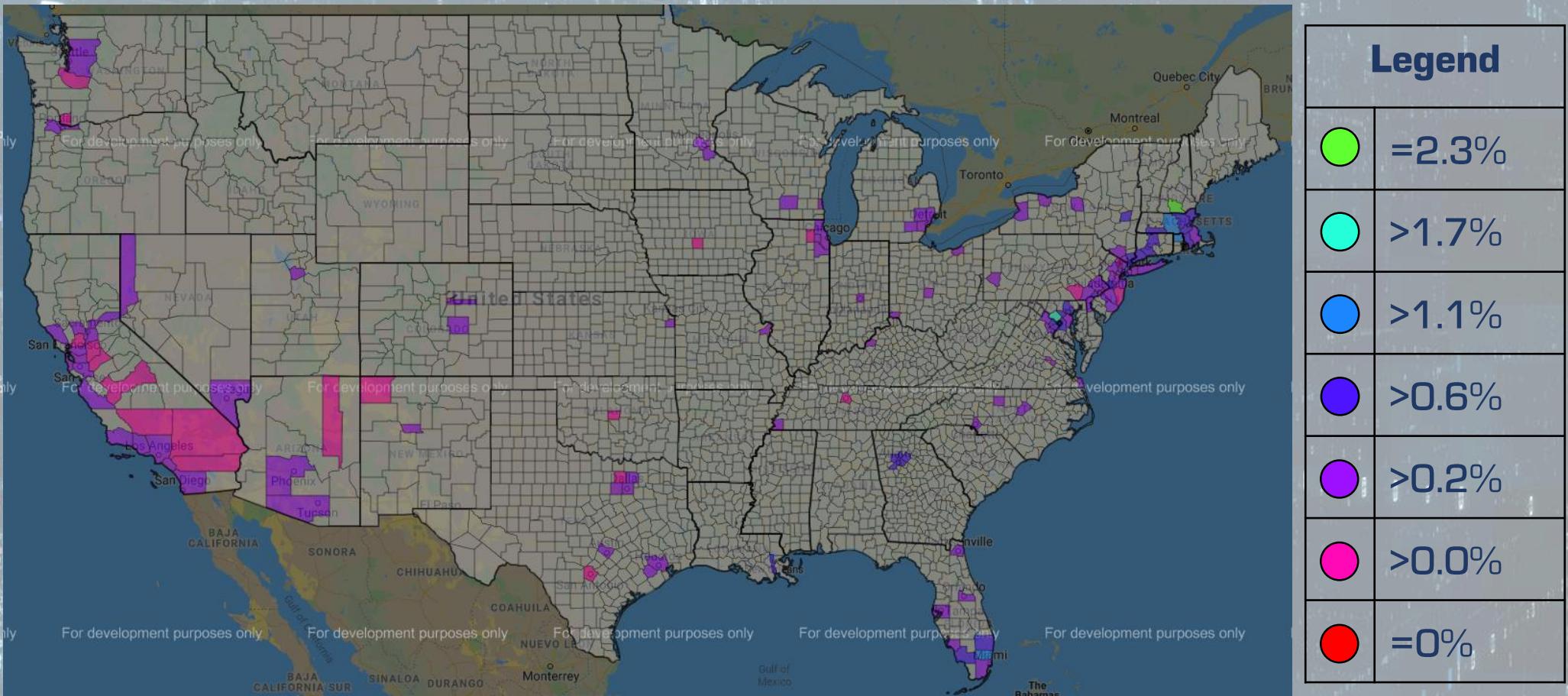
- Queens County, New York
- % Chinese Speaking: 5.2%
- # of Chinese Speakers: 120,505



## Legend

|   |       |
|---|-------|
| ● | =8.6% |
| ● | >6.5% |
| ● | >4.4% |
| ● | >2.2% |
| ● | >0.9% |
| ● | >0.0% |
| ● | =0%   |

# Distribution of French Speakers



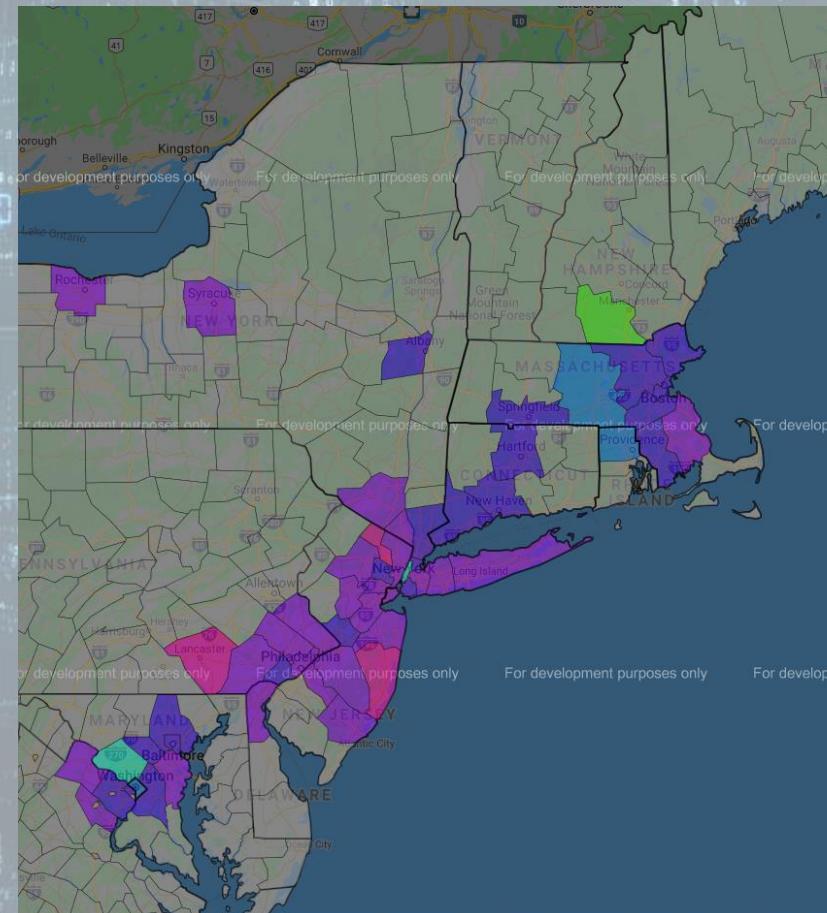
# Distribution of French Speakers

## Foxborough County, NH

- Population: 403, 986
- % French Speaking: 2.3%
- # of French Speakers: 9,465

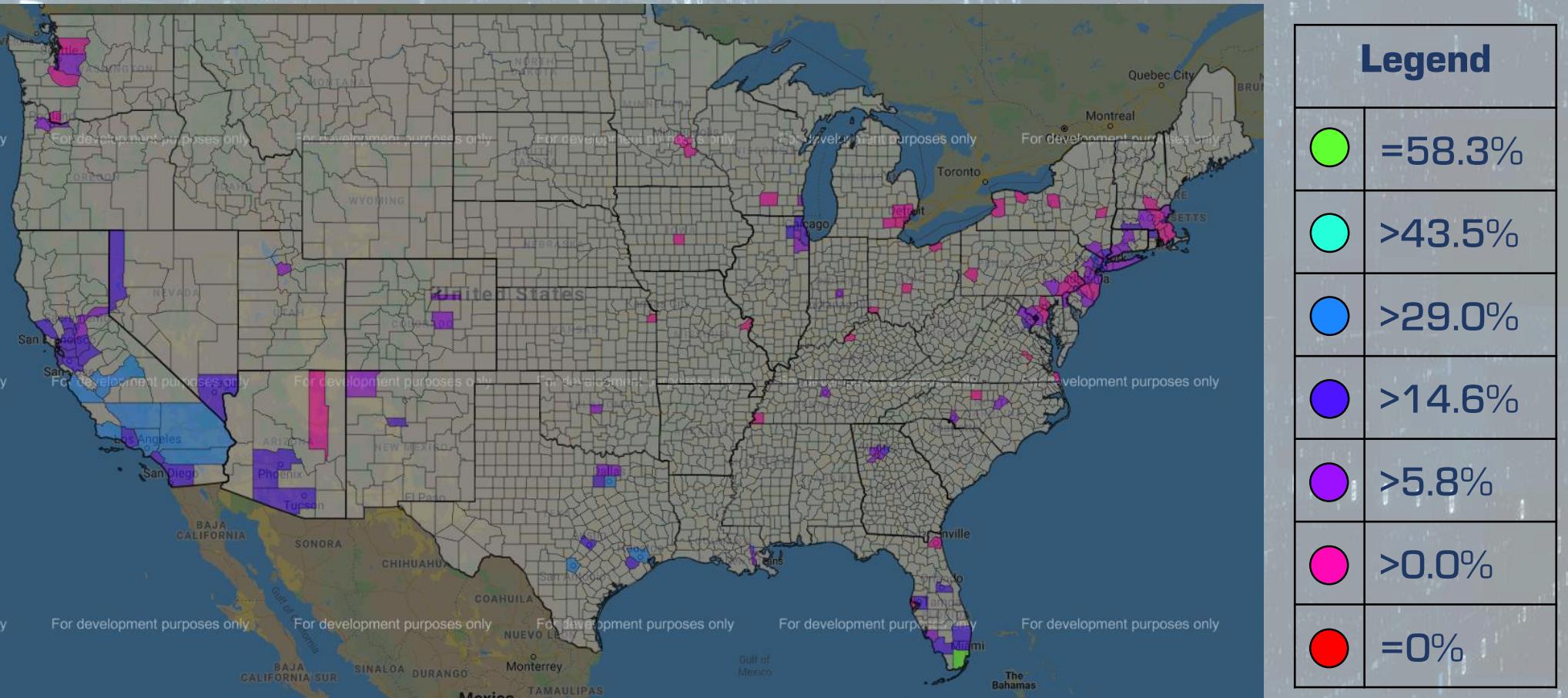
## Next Up:

- Montgomery County, MD
- % French Speaking: 2.1%
- # of French Speakers: 21,660



| Legend                                    |       |
|---|-------|
| <span style="color: lightgreen;">●</span> | =2.3% |
| <span style="color: cyan;">●</span>       | >1.7% |
| <span style="color: blue;">●</span>       | >1.1% |
| <span style="color: purple;">●</span>     | >0.6% |
| <span style="color: magenta;">●</span>    | >0.2% |
| <span style="color: red;">●</span>        | >0.0% |
| <span style="color: black;">●</span>      | =0%   |

# Distribution of Spanish Speakers



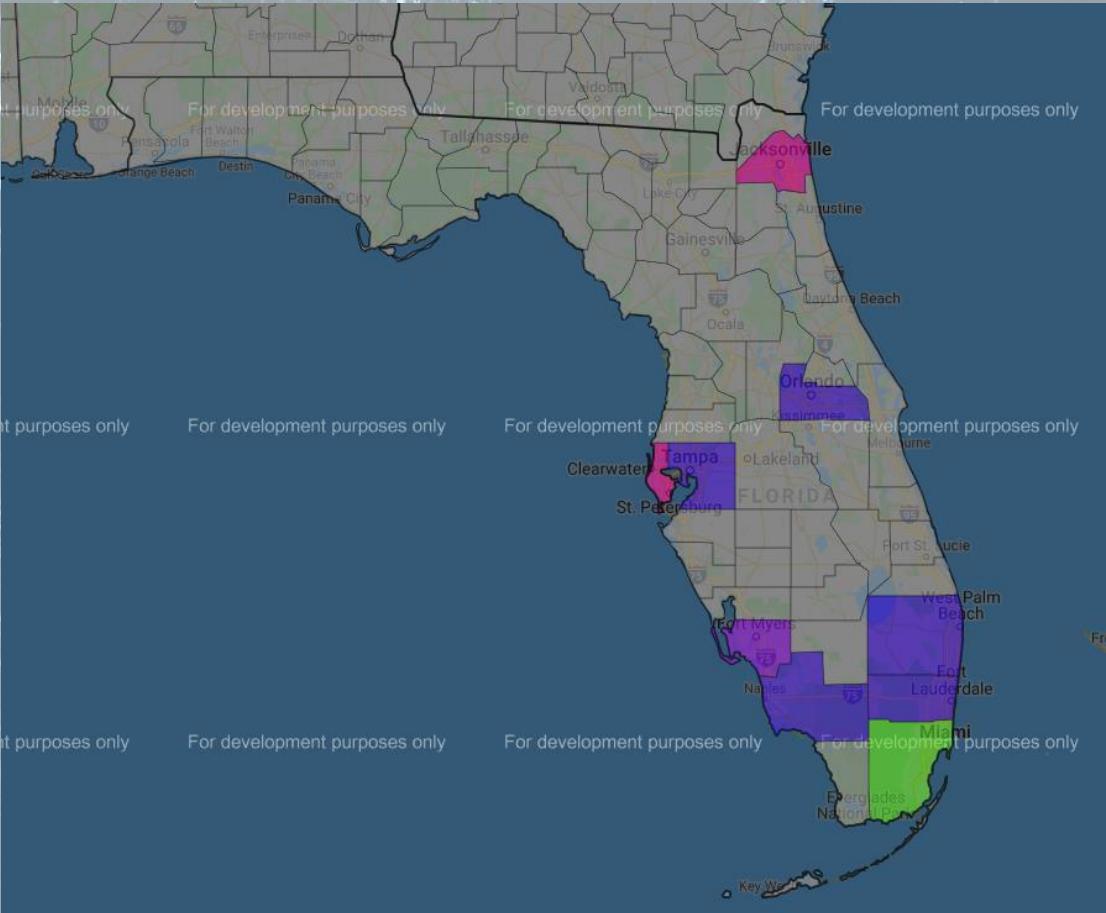
# Distribution of Spanish Speakers

## Miami-Dade County, FL

- Population: 2,617,176
- % Spanish Speaking: 58.3%
- # of Spanish Speakers: 1,526,290

## Next Up:

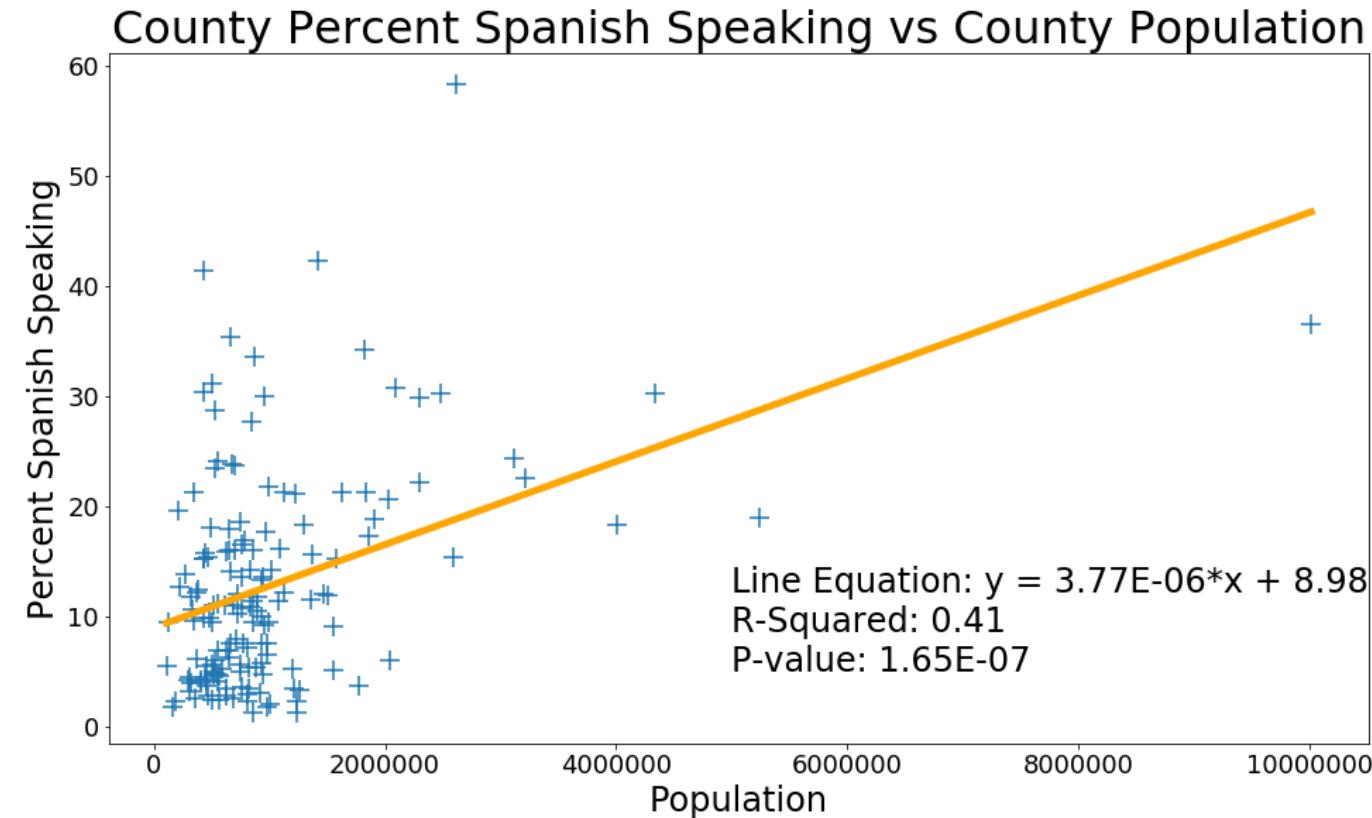
- Bronx County, NY
- % Spanish Speaking: 42.4%
- # of Spanish Speakers: 600,930



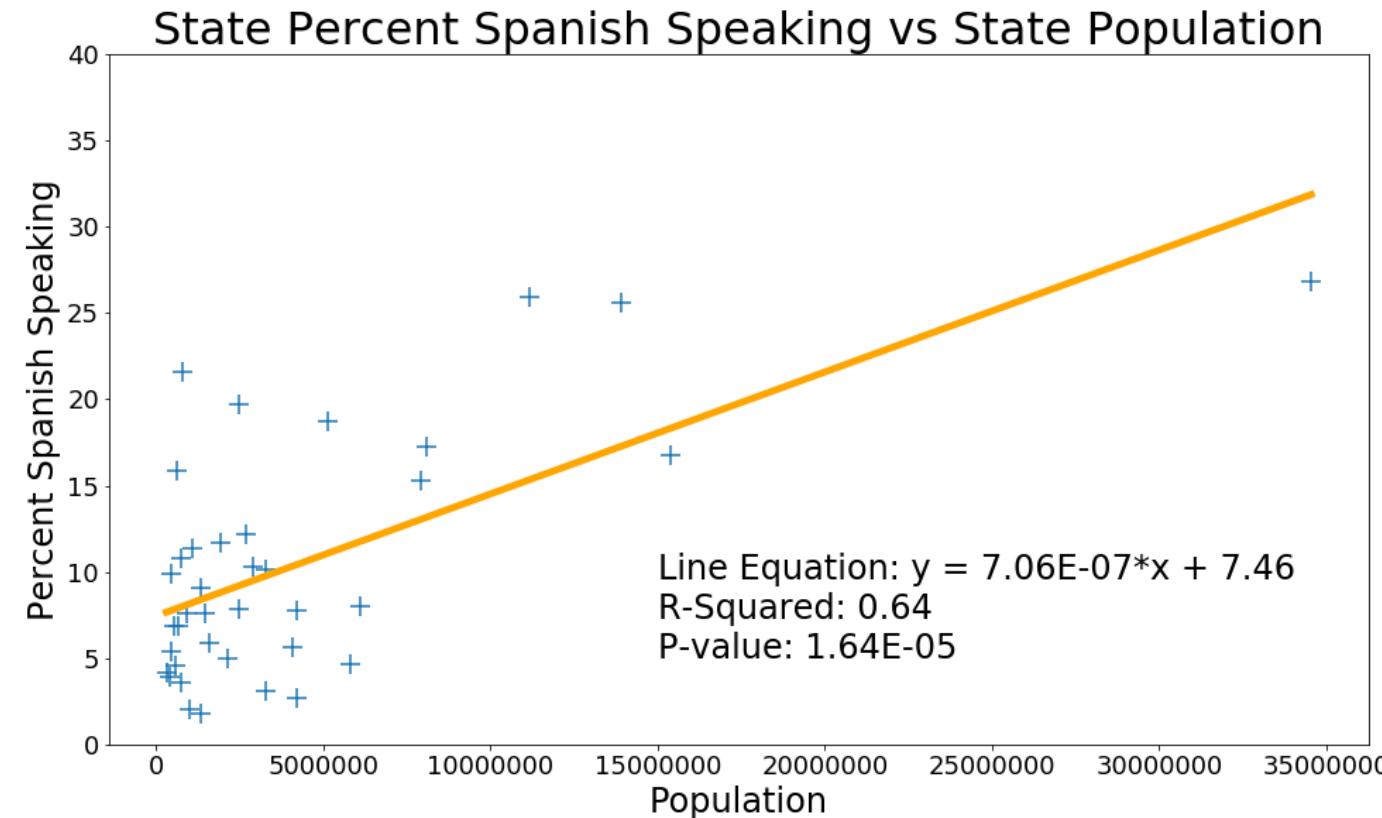
## Legend

|   |        |
|---|--------|
| <span style="color: green;">●</span>      | =58.3% |
| <span style="color: cyan;">●</span>       | >43.5% |
| <span style="color: blue;">●</span>       | >29.0% |
| <span style="color: purple;">●</span>     | >14.6% |
| <span style="color: darkpurple;">●</span> | >5.8%  |
| <span style="color: magenta;">●</span>    | >0.0%  |
| <span style="color: red;">●</span>        | =0%    |

# Linear Regressions for Research Questions



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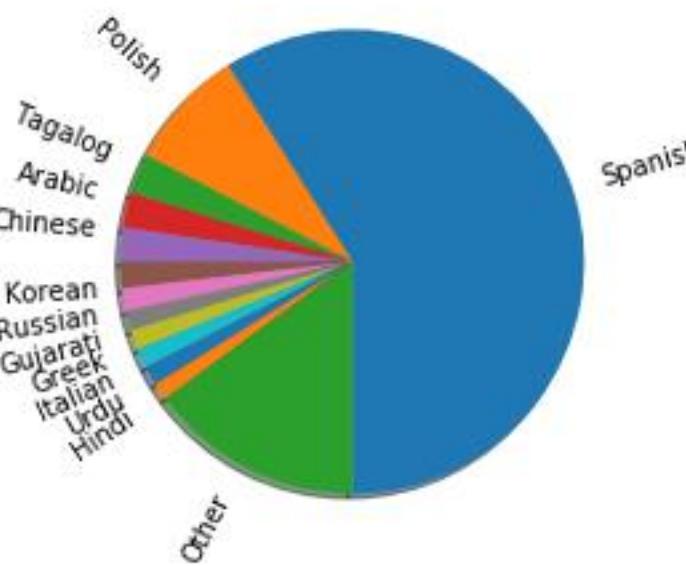
# Cook County

- 115 languages are spoken at home in Cook County.
- 1 in 3 people speak a language other than English at home
- 60% of people who do not speak English at home speak Spanish.
  - Less than 9% speak the next most spoken language, Polish

|  | Spanish<br>Speakers  | Polish<br>Speakers | Tagalog<br>Speakers | Arabic<br>Speakers | Chinese<br>Speakers | Korean<br>Speakers | Russian<br>Speakers |
|--|----------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|
|  | 991,495              | 141,431            | 46,510              | 41,460             | 39,185              | 31,321             | 26,215              |
|  | Gujarati<br>Speakers | Greek<br>Speakers  | Italian<br>Speakers | Urdu<br>Speakers   | Hindi<br>Speakers   | Other<br>Speakers  |                     |
|  | 232,50               | 23,031             | 22,651              | 22,583             | 20,180              | 250,953            |                     |

# Cook County

Breakdown of Languages Spoken in Cook County



# Research Questions

- What languages are spoken here in Cook County?
  - Major language groups include Spanish, Polish, Tagalog, Arabic, Chinese, Korean, and Russian

# Research Questions

- “Deep Dive” for French, Chinese and Spanish
- Where do speakers of these languages congregate?
  - French: The northeast and mid-Atlantic
  - Chinese: San Francisco Bay area
  - Spanish: Dispersed w/ large percentages in Miami and New York City
- How many are there in various US metropolitan areas?

# Research Questions

- Do speakers of foreign languages tend to aggregate in larger metropolitan areas?
  - The percentage of Spanish speakers does increase somewhat by the size of the urban area

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