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608 Final Project Proposal

For my final project I would like to create a Dash visualization that allows for an exploration of the population changes of the US metropolitan areas over the past decade. The growing divide between urban and rural areas has been a major topic in the United States political discussions for the past few years and I would like to examine if there is a trend of Americans moving from rural areas to urban ones. Furthermore I would like to compare the growth of larger metropolitan areas vs. smaller ones. My plan is to utilize official government data to create a series of visualizations that will allow for this exploration.

Data: <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>

All of the data I will be using will be pulled from here. Unfortunately, I cannot link directly to the data as they are created as reports on the fly when requested.

My strategy is as follows:

- Use the census website to download and clean data on the populations of major metropolitan areas between 2010 and 2017
- Organize this data for ingestion into an SQL database
- Create a Flask app to house a Dash visualization
- Create a Dash visualization to query the database for information and to update the visualization with information from the query.
- If time allows, I'd like to also create a Redis server to store recent queries to reduce the load on the SQL server.