

COVID-19 Vaccination Rate by Age, Race/Ethnicity, Income, and Politics

Summary:

Our project focuses on the current topic of COVID-19 vaccinations and we studied in depth on vaccination status of the US counties and its relation with racial, economical, demographic, and political disparities in the vaccination. We used a vaccine dataset from Center of Disease Control(CDC) and 2020 election data from MIT data source. Demographics and other parameters like income, poverty, population, unemployment were obtained from Census API(2019 census data).

We cleaned the data using Jupyter Notebook. Cleaning process included removing unnecessary columns, adding columns, removing nan value, and sorting the data and saving the cleaned data for further analysis. We loaded data into a PostgreSQL database by using sqlalchemy. We also loaded the data in MongoDB by using pymongo,

Hence from this project, we obtain some useful relationship between income, race, demographic, and politics of US counties to covid-19 vaccination. From our initial analysis, we found that many counties with a higher percentage of vaccination are the counties where Biden won in 2020. We don't see any difference with household income and education rate on vaccination. We see that there are some effects of race on vaccination. A detailed analysis can be done by using our database.