Understanding how urban diversity affects health outcomes for minority communities in NYC.

- **Approach.** We plan to create a regression predictor in order to model various grouped health outcomes of minority populations in NYC based on income, poverty levels, healthcare funding, public transportation in their area, and social vulnerability. Our approach is novel as it will take into account a wider array of health outcomes (e.g. infant mortality rates, chronic disease, gun violence) in a concentrated geographic area. Observing a wider array of health outcomes will allow us to pinpoint possible correlation between factors and outcomes in places where other, more narrow studies may not have looked.
- **Plan.** We would like to create a tool that can be used by policymakers to make data-driven decisions in terms of how to help uplift and improve the lives and health of minorities in NYC. We plan to use datasets from https://equity.nyc.gov/ and NYC Open Data. Each member will create a regression model that takes social inputs about an individual and try to predict their health outcomes. Moreover, these models together will form a regression predictorAs a stretch goal, we hope to create a visualization to contextualize different health outcomes to the five boroughs of NYC. The main concerns we have is finding the right datasets and narrowing down the number of factors to consider for our three respective models.
- **Evaluation**. Using datasets of patients and their different factors/outcomes we will compare our results to the true results of the health outcomes. We will look at our MSE as well as training and testing data accuracy and try to minimize the MSE as much as possible while maximizing our accuracy.
- **Work Split.** Each member of our team will use the same input factors, compiled from disparate sources (e.g. Chronic Conditions Dataset, 45 Equity Outcomes for NYC), and train a regression model on a set of different outcomes (Herve -Chronic diseases , Aria - Prenatal care, postpartum care, infant mortality, Louis - violence/drug overdose deaths).