# **Healthcare Project**

# **Project Status Update 10/2/18**

**Questions:**

Is there a correlation between air quality and asthma?

How has air quality changed over time?

How has asthma prevalance changed over time?

Pending - How does traffic density play a role in air quality / asthma prevalence?

**Data Sources:**

AQI by county by year

Asthma ER visits by county by year

Population by county by year

**Task List**

* Create a dataframe of county, year, AQI columns, ER Visits, Population (Joseph)
* Locate traffic density data & create a data frame that includes county (all available), year (2010 - 2017), and an indicator of traffic density (Chenchen / Ted)
* Research AQI - median/90th (AQI) (Erica)
* Calculate:
  + Asthma prevalence for each county and each year (Joseph)
* Stats: (Chenchen)
  + Average AQI
  + Student's ttest
  + Regression
  + Any additional Statistical Analysis
* Plot: (Erica)
  + AQI vs Asthma Prevalence (one plot for each year)
* User Input:(Shweta / Ted)
  + Ask user, "Which county / year?"
  + Display a plot of that county's AQI over time
  + Display a plot of that county's Asthma Prevalence over time
  + Display any other good ideas
* API call to Google maps to create a heat map for AQI & most recent year (or another interesting display)