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TEAM #6 Project-one

# Project: TEA Student DATA Analysis

# TEAM MEMBERS

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# Project Description/Outline Our project will analyze education data to discover relationships that lead to conclusions that will help inform curriculum design and classroom instruction

# Research Questions to Answer Is there a relationship between teacher data (length of time in classroom, salary, highest degree earned) and student achievement? Is there a relationship between geographic location and student achievement? Is there a relationship between poverty and student achievement? If these relationships exist, what conclusions can we draw to implement practices that will improve student outcomes

# Data sources or Data Sets to be Used Data downloads from the Texas Academic Performance Report issued each year by the Texas Education Agency (<https://rptsvr1.tea.texas.gov/perfreport/tapr/2017/download/DownloadData.html>). Downloads from other years can be accessed by simply changing the year in the url.

# APIs to be consumed (if any) None

# Rough Breakdown of Tasks:

1. Architect the data flow:

a. Decide on how to show the data, graphs types , numbers etc

b. Identifying data needed from files and its mapping from data files

c. Define panada data frames.

d. Define aggregated dataframes

e. Determine the scope for parsing functions

f. Define plots and its functions

g. Decide on Deploying platform if needed

h. Document this on wiki

2. Gather data:

a. create keys and authentication if any --define gateway

b. create function to extract the data into dataframe

3. Check the validity of data:

a. create functions to parse the data

b. create function to validate integrity of data and fix if necessary

4. Create aggregation

a. Perform needed aggregation on data for plots

b. Create functions/code for sampling/custom group

5. plot

a. Create function for plots

b. create mechanism for colors/bins like dictionaries etc

6. Deploying

a. Put everything together

b. Deploying the code

7. Prepare for demo and presentations

a. Create documentation of the code on wiki--finalizing

b. Test the demo

c. Make presentation