# PyCity School District High School Analysis

## Overview

PyCity School District Board members have tasked the Analytics Department to do assess the pass / fail rate of students in Math and Reading

based on several factors such as High School, Grade, and to some extent, budget per student.

## Process and Analysis

The district provided the data for analysis. It was initially assumed that this data has

been correctly collected and there is no large-scale issue with it; however, during the analysis

it was brought to the attention of the team that there may be irregularities regarding Thomas High

School's 9th grade class and hence the testing data for both math and reading has been struck from

overall data set. This will introduce an error in the data at both the Thomas High School level and

the district level as well.

The data was then sorted along the following:

-School Summary

-Aggregated across grade level. No filtering.

-High and Low Performing Schools

-Aggregated across grade level. Top 5 and Bottom 5 schools.

-Math and Reading Scores by Grade

-Sorted only by subject Math or Reading.

-Score by School’s Spending

-Four distinct per student spending bins.

-Scores by School Size

-Three bin sizes.

-Scores by School Type

-Two bins.

## Summary Output Results

School Summary

![](Resources/District\_Summary.png)

High and Low Performing Schools

![](Resources/High\_Performing.png)

Low Performing Schools

![](Resources/Low\_Performing.png)

Math Scores by Grade

![](Resources/Math\_Score\_byGrade.png)

Reading Scores by Grade

![](Resources/Read\_Score\_byGrade.png)

Score by School’s Spending

![](Resources/Scores\_by\_School\_Spending.png)

Scores by School Size

![](Resources/Scores\_by\_School\_Size.png)

Scores by School Type

![](Resources/Scores\_by\_School\_Type.png)

## Summary

In review of the data there are some conclusion that can be immediately seen. At an elementary level it can be seen that charter schools

with smaller number of students pass more student in the areas of Math and Reading. Once more they seem to be able to achieve this with an

overall smaller budget in terms of per student spending.

This analysis does not take anything else into account such as parent involment or other at home factors.

Lastly, there are some concerns regarding the nullification of Thomas High School's 9th Grade Class. Though unlikely this could lead to

and error as high as (461 / 1635 \* 100) = 28.2% for the school's stats though it is more likely roughly in line with the failure rates of

other large district schools. This will also add a chance of error through the PyCity District of (461 / 39170 \* 100) = 1.2% though,

again, the number is likely smaller.