PyCity Schools Analysis

In this School District Dataset, there are 40,000 students across 15 schools. In terms of district wide metrics, there average math score is 79%, the average reading score is 82%, and 75% of all students are passing math, while 86% of all students are passing reading.

It is clear that there are problems in the district, because only 65% of students passed both math and reading. When looking at the highest performing schools in terms of both reading and math scores overall, it is clear that these schools are in the middle range of the budget, and the schools on the high end of the budget do not necessarily have the highest performance numbers.

The top 5 Highest Performing Schools, as measured by Percentage Passing Both Math and Reading, have passing scores of greater than 90% for each school respectively. As the Chief Data Scientist of the District, I would be interested in improving the bottom performing schools, as measured by percentage overall passing marks. It is evident in this regard that Rodriguez High School, Figueroa High School, Huang High School, Hernandez High School and Johnson High School have passing rates of around 50% for each of the schools. In terms of the bigger picture of what is going on in each one of the schools, there are a lot of students in each school, between 3,000 and 5,000 students, and the total school budget is on the high end of the spectrum of the district numbers. The issue seems to be Mathematics Exams, as the average math score is 76%-77%. There is a higher percentage score for students passing reading versus students passing math. The 5 schools mentioned above, according to their administrations, have underperforming average scores for all grades 9 through 12, and all of the reading grades are in the low 80%'s.

It is counterintuitive relationship between Spending Ranges and Scores, which indicates that the higher spending is not improving student exam performance. Charter schools have significantly higher scores than District schools, and the difference between the two is most notable in terms of Average Percentage Passing Math by Type [of School], Average Percentage Passing Reading By Type [of School], Average Percentage Passing [by Type].