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Module 4 Challenge: Analysis of District and School Summaries

In the first part of this challenge, I created a summary that shows a quick overview of the district I am analyzing. From this, I found the total number of schools in the district, the total number of students, the total budget, the average math and reading scores, and the percentage of students who are passing math, reading, or both.

In the second part of this challenge, I went in depth to see if there were any trends in the data found above. To do this, I created a dataframe that summarized each school by the school type, the total students, the total school budget, the per student budget, the average math and reading scores, and the percentage of students passing math, reading, or both. From my analysis, I found that of the 15 schools in the district, the top 5 schools (based on the percentage of students passing both math and reading) are all charter schools. By contrast, the bottom 5 schools in the district (based on the same criteria) are all district schools. Interestingly, of these schools, the bottom performing schools spent more per student on average than the top performing schools.

This seems to be a trend overall: the spending summary shows that the schools in the lowest spending bin have the highest overall passing rate, with the rate decreasing with each increasing spending bin. The largest jump occurs between the $585-630 and $630-645 ranges.

The school size summary shows the largest schools performing the most poorly in terms of the percentage of the students passing math, reading, and overall. The average math and reading scores are generally similar across size, though the largest schools are still performing more poorly than the small and medium size schools.

Finally, the school type summary shows the charter schools performing better than district schools overall, with the most significant differences in the percentage of students passing math (94% versus 67%), reading (97% versus 81%), and overall (90% versus 54%).