* You must include a written description of at least two observable trends based on the data.

School Data Assignment

Well done! Having spent years analyzing financial records for big banks, you've finally scratched your idealistic itch and joined the education sector. In your latest role, you've become the Chief Data Scientist for your city's school district. In this capacity, you'll be helping the school board and mayor make strategic decisions regarding future school budgets and priorities.

As a first task, you've been asked to analyze the district-wide standardized test results. You'll be given access to every student's math and reading scores, as well as various information on the schools they attend. Your responsibility is to aggregate the data to and showcase obvious trends in school performance.

Observable Data Trends

1. Charter schools on average had higher average reading and math scores. This could be the case due to the smaller amount of students that attend the charter schools as compared to the district schools. Smaller class sizes typically mean more individualized attention, and assistance based on the number of students per class. Number of students per class is not available in this data, and is therefore a limitation to fully stating the amount of attention each student received that contributed to their performance on the district-wide standardized test results.
2. District schools have a higher budget per student, but consistently underperform compared to charter school students. It would be interesting to see how that budget is allocated from charter students vs. district school students. Perhaps the budget in district is higher, but it’s allocated across multiple programs such as sports or music. This lack of information is a limitation in the data set, but could be a main contributor in understanding how resources are allocated.
3. There isn’t a huge difference between average score and % of students passing between small and medium schools. However, in larger schools the average and percent scores decrease greatly. This could be due to lack of individualized attention – echoing the point I made in my first data trend example. Larger schools = more students, and district wide standardized test typically measure aptitude. If that aptitude hasn’t been developed over time, and resources have been limited it would explain the lower average score within the larger schools.