Module #4 Written Assignment (pandas-challenge) – Daniel Simonson

Background

The objective of this analysis is to evaluate standardized test results and school budgets across disctricts and schools. The given data is math and reading scores in accordance with their respective schools. By querying and sorting this data, we can draw useful inferences about what drives student success and what factors impact performance. The project processes data with pandas in a Jupyter Notebook environment.

From the Data…

1. School size and passing rate
   1. Smaller schools were found to have, on average, a higher passing rate across both subjects when compared to larger schools. There is nothing in the data that points to this, but smaller class sizes typically allow for more direct teacher-student correspondence and individualized attention. The smaller class sizes could help larger schools achieve higher test scores, and thus an increased budget.
   2. Shools that spend more of their budget *per student* frequently display higher test results. While this is more prevalent in the math exam, it also should be noted that there are diminishing returns on investment.
   3. From the data, charter schools showed higher passing grades on the reading and math exam. Whatever methods these schools are employing should be looked into and potentially adopted by larger schools.

Conclusion

This analysis successfully broke down data from a .csv file and provided insights based on data trends. Being able to react to this data and make adjustments will help optimize student learning and budget allocation. If more data were to be provided, it should be derived from teacher//student ratios and socioeconomic conditions.