PyCitySchools Write Up

This analysis uses data frames that outlines both school-level and student-level statistics within a specific school district. The data frame for school-level statistics provides information about the size of the school, the type of school, and the school’s overall budget. The data frame for student-level statistics provides information for each student within the schools across the district like their math score, reading score, gender, grade level, and student id. Overall, the analysis combines both data sets to examine how student and school performance is affected by various aspects like school type, budget, and school size. Performance is generally measured by the student’s individual or collective grades in math, reading, or both. Comparisons are also made between different schools and among different grade levels.

Based on the results of the data analysis that was conducted for this assignment, it seems that budget per student does not necessarily correlate with better overall performances, however class size and the type of school (charter or district), does correlate with changes in student performance. The dataframe that compares student grades with budget shows the highest performance occurs in schools with the lowest spending range per student, and the lowest performance occurs in schools with the highest spending range per student. The percentage of students passing math and reading is 84% in the lowest budget range, and 50% in the highest budget range, which is a noticeable change. Conversely, the size of the school (small, medium, or large) does seem to correlate with changes in performance where smaller schools have better overall performance than larger schools. The smallest schools see roughly 84% of students passing math and reading, whereas larger schools only see roughly 55% of students passing math and reading. Finally, the type of school also correlates with different overall performance in students where charter schools see 84% of students passing math and reading, but district schools only have 50% of students passing math and reading. While each of these trends show noticeable differences in performance for each parameter, no statistical analysis was completed on the values and thus we cannot infer causation, and can merely make observations.