Pandas Challenge: PyCitySchools

Conclusions

1. Charter schools have higher rates of Overall Passing scores than District schools.
2. The gap between District and Charter schools is closer when comparing Reading scores and wider when comparing Math scores.
3. School Type has a higher correlation with Overall Passing % than Per Student Budget.
   1. On average, District schools spend more money per student compared to Charter schools yet exhibit lower Overall Passing rates.
4. Schools with more than 2000 total students tend to perform worse than schools with less than 2000 total students.
   1. Schools with more than 2000 students are District schools and those with less than 2000 are Charter schools.

Therefore, the data set reveals that Charter schools have higher Reading scores, Math scores, and, as a result, higher Overall Passing rates than District schools even if Charters spend less money per student. From the data set, we can infer that this is primarily due to the number of Total Students. However, this may be an incomplete story.

To obtain a better picture of the determining factors of test scores and passing rates, more data is required, for example: teacher-to-student ratio, teacher qualifications/training, teacher flexibility (i.e. ability to adapt teaching methods), type of school schedule, curriculum composition, availability of extra-curricular programs, number of students on a free lunch program, counselor-to-student ratio, and rate of parent engagement with the school.