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PyCitySchools Conclusions

Using the various data frames produced with different conditions, these analysis provide significant insight about the school district’s performance trends based on various factors.

The first and most glaring conclusion we can draw is that while the average reading scores and pass rates are relatively consistent across all schools (albeit favored towards smaller institutions), there is a huge disparity between math performance at charter schools and district schools. All of the charter schools have smaller student bodies than any of the district schools, and between both types there is a very clear negative correlation between number of students and pass rate, with roughly only two thirds of the district students passing path, compared to a solid 93.62% of the charter students making the grade. As a result, nearly *half* of the district schools’ students failing to pass overall, in contrast to only a tenth of the charter schools’ students failing to pass. Whether the cause of a school’s poor performance is being a district school or simply having a larger student body is unclear, but it is still evident that the larger district schools need quite a leg up if they’re to compete with the superior grades at the smaller charter schools.

It is also worth noting that extra spending per student does *not* have a notable positive impact on student performance as one would expect. District schools as a whole happen to have drastically larger budgets in the first place, enough that they have predominantly larger ratios of spending per student. Nevertheless, all of that extra spending is not enough to break even, as the upper two spending tiers have clearly the worst scores and pass rates in the spending tier data frame (the difference is insignificant for the lower two spending tiers, neither of which contain any district schools, anyway).

Finally, it is evident that year is an insignificant factor towards student performance, regardless of the institution. Between both the average math and average reading score data frames, there is extremely little variance between the four grades at each school, with no year standing out as drastically better or worse than the others. Knowing all of this, we can conclude that the matter of performance has more to do with the school as a whole, rather than a poorly or exceptionally designed curriculum for a particular year that skews the averages one way or the other.