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DPI Data Science

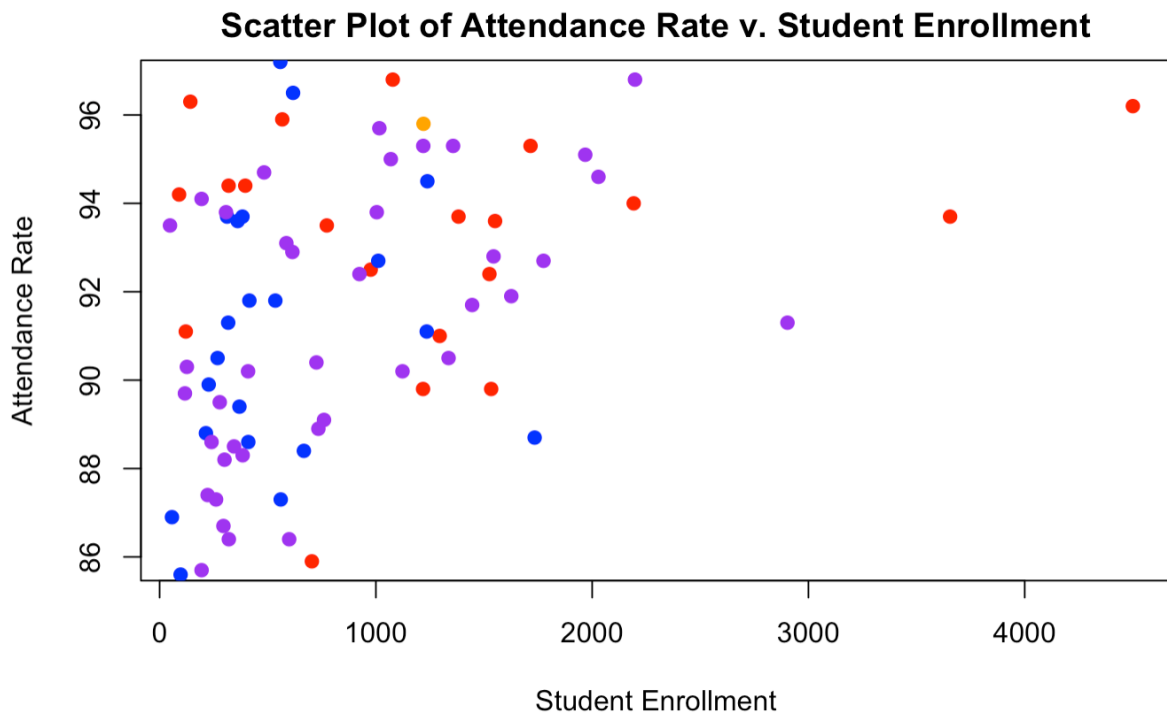
“You and Data Science” Report

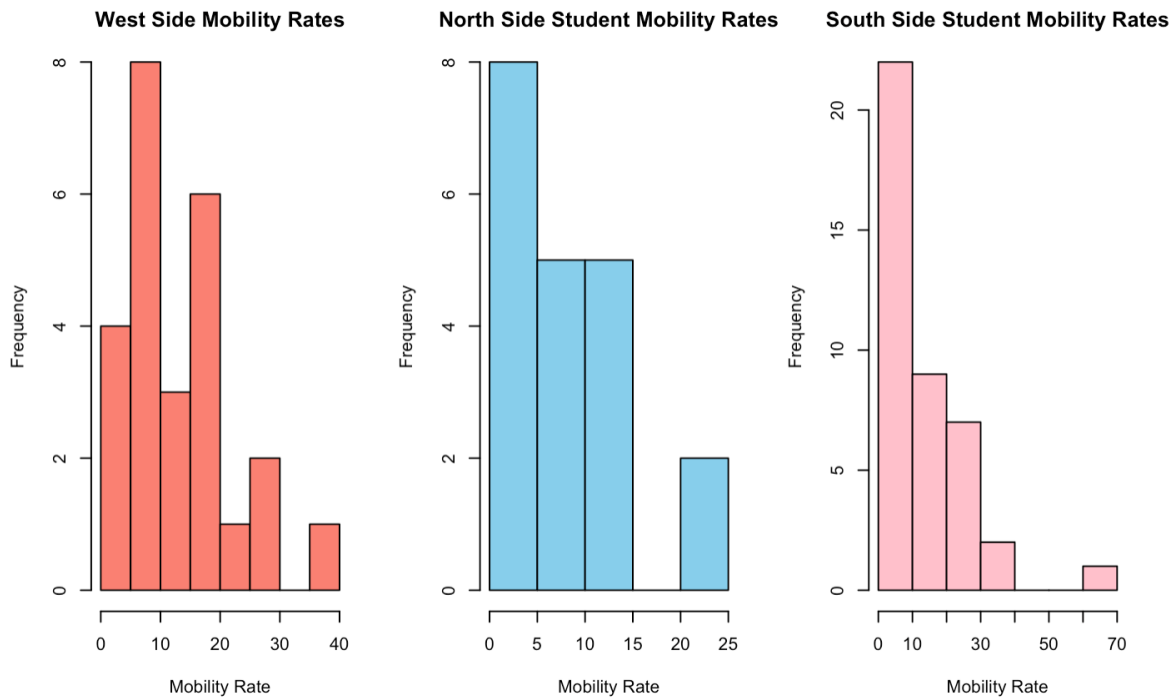
As a Chicago Public School student, I have been conditioned to talk about the ups and downs of CPS as a result of witnessing three separate battles between the district and Chicago Teachers Union. Thus, finding a dataset about CPS was important to me. Historically, the North side of Chicago is more privileged than the South and West side as a result of segregation (“Black Belt of Chicago”), so I wanted to see if there was a difference in CPS data based on location.

Using the 2020 Illinois Schools Report Public Dataset, I was able to filter out all the CPS schools. For the purpose of this project, I decided to focus on CPS high schools as opposed to elementary schools and high schools. After filtering out all CPS high schools into a separate dataset and removing unnecessary columns, I added a column into my dataset titled “zip.code” and added all the zip codes of the high schools. Adding this column allowed me to organize the schools by location, making four subsets based on zip code location. I made four graphs in total.

The first graph was a scatter plot of student enrollment and student attendance rate, which was color coded based on location. The average attendance rate in 2020 at the CPS high schools in the dataset was roughly 91%, and the average enrollment in each school was approximately 818 students. As you can tell by the graph, the majority of the schools plotted on the graph are well above the 91% attendance range and at or above 818 students enrolled in the school. However, nearly all the schools that are under the average attendance rate and enrollment numbers are schools from the South and West side (blue for the West and purple for the South).

It is worth noting that attendance and enrollment numbers dropped in 2020 as a result of the COVID-19 pandemic, but it is evident by the graph that the problem affected more non-North side high schools.





My remaining three graphs deal with the differing mobility rates between the three regions. A school's mobility rate is the rate at which students are transferring in and out of the school. A higher mobility rate is related to lower achievement in a school. Thinking about it logically, when you transfer schools, your learning is disrupted in order to adjust to a new school environment, new teachers, and catching up on missed schoolwork. In most situations, it takes time for both the student and school to settle into a proper learning routine, but if you have multiple students transferring in and out of a school, this can affect the quality of education provided by the school and the learning achievements of the students. Thus, higher mobility rates cause lower achievement rates. Looking at the graphs, it's noticeable that the lowest mobility rates can be found in the North side of Chicago. It's worth noting that the South side graph has more schools within its subset than the North and West side subsets. One's mobility rate is related to financial situation, so a higher mobility rate equates to a high financial instability. By

looking at location and mobility rates, we can see that students in the South and West side are at a higher disadvantage when it comes to education as opposed to the North side.

This analysis inspires me to recognize my privilege as a North side CPS student. I want to use this data and other CPS-related projects I may take on to support the South and West side of Chicago.