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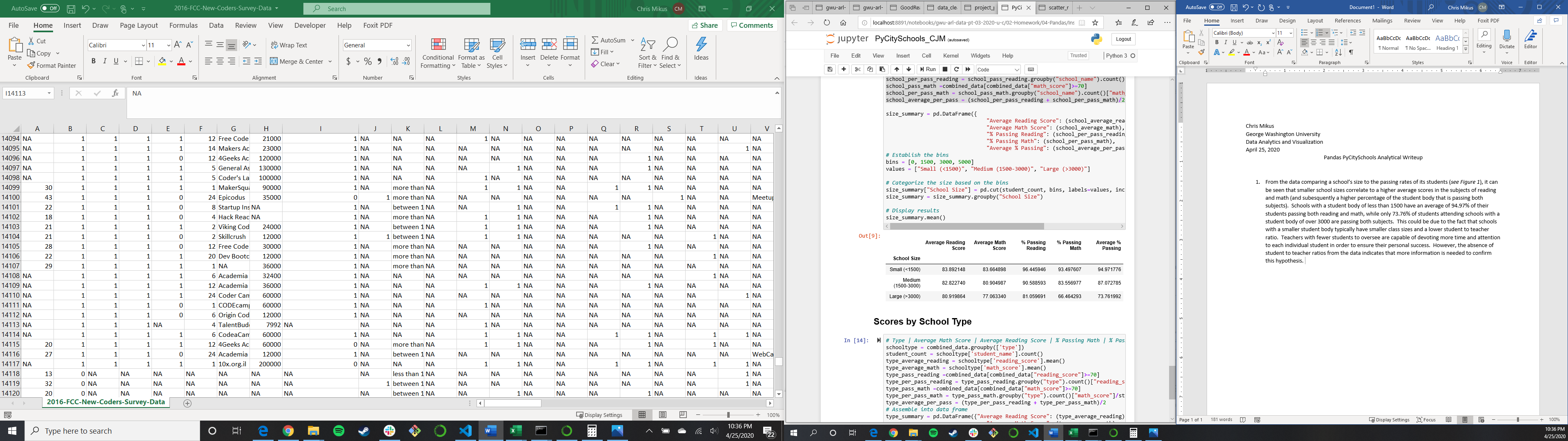
Data Analytics and Visualization

April 25, 2020

Pandas PyCitySchools Analytical Writeup

1. From the data comparing a school’s size to the passing rates of its students (*see Table 1*), it can be seen that smaller school sizes correlate to a higher average scores in the subjects of reading and math (and subesquently a higher percentage of the student body that is passing both subjects). Schools with a student body of less than 1500 have an average of 94.97% of their students passing reading and math, while only 73.76% of students attending schools with a student body of over 3000 are passing both subjects. This could be due to the fact that schools with a smaller student body typically have smaller class sizes and a lower student to teacher ratio. Teachers with fewer students to oversee are capable of devoting more time and attention to each individual student in order to ensure their personal success. However, the absence of student to teacher ratios from the data indicates that more information is needed to confirm this hypothesis.

*Table 1: School Passing Rates Data Grouped by School Size*



1. From the data comparing a school’s type (charter or district) to the passing rates of its students (*see Table 2*), it can be seen that charter schools outperform their district school counterparts in the subjects of reading and math. An average of 95.17% of scores in reading and math held by charter school students are deemed “passing,” well ahead of the 73.71% average pass rate exhibited by the students of district schools. There may be some confounding factors at play, however, that make direct comparison between the two types of schools difficult. For instance, district schools are all required to adhere to the educational requirements set forth by the state board of education, while charter schools are afforded much more flexibility in setting their own curriculum. Although it cannot be explored with this data, if a charter school’s curriculum is less rigorous than state guidelines, then a higher percentage of passing grades among charter school students can be partially explained.

*Table 2: School Passing Rates Data Grouped by School Type*

