

The Impact of COVID-19 on Student Attendance and Achievement in New York City

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Highlights

- There is an overall decrease in student attendance from 2018 to 2021
- When comparing districts with the highest and lowest attendance rates, the district with the lowest rate has a higher percentage of black and hispanic students
- Attendance rates trend with poverty rate, but is not the sole influence

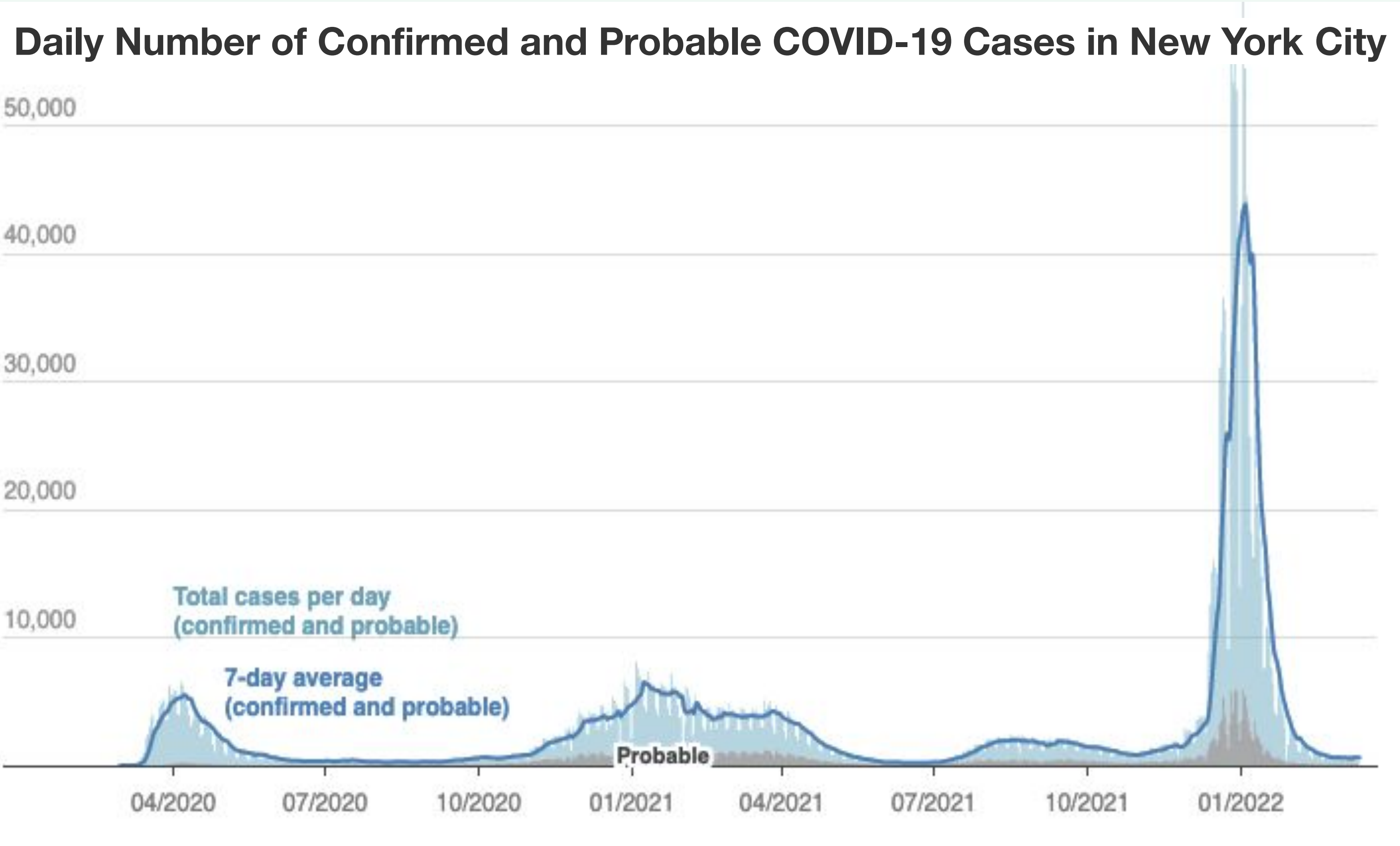
Background

The COVID-19 pandemic disrupted every facet of our lives—socially, financially, physically, emotionally, and academically. As positive cases and fatalities associated with the coronavirus increased, school districts were forced to close their doors and find sustainable alternatives to ensure the continuation of student learning and success. Following the cessation of in-person learning in March 2020, many institutions implemented different learning approaches including fully remote learning, in-person learning, and hybrid or blended learning, where students could combine in-person and remote learning options.

Objectives

Since New York City was one of the first and largest cities in America negatively impacted by the spread, we focused our attention on this region. Given the drastic shift in the way that education was presented during the first COVID peak, our team objectives were to:

1. Identify trends in student attendance rates throughout the 2020-2021 school year compared to previous years
2. Identify the learning style that produces the highest attendance rates
3. Create a display of our findings that is readily accessible to the general public



Source: [NYC Department of Health](#)

Data Exploration

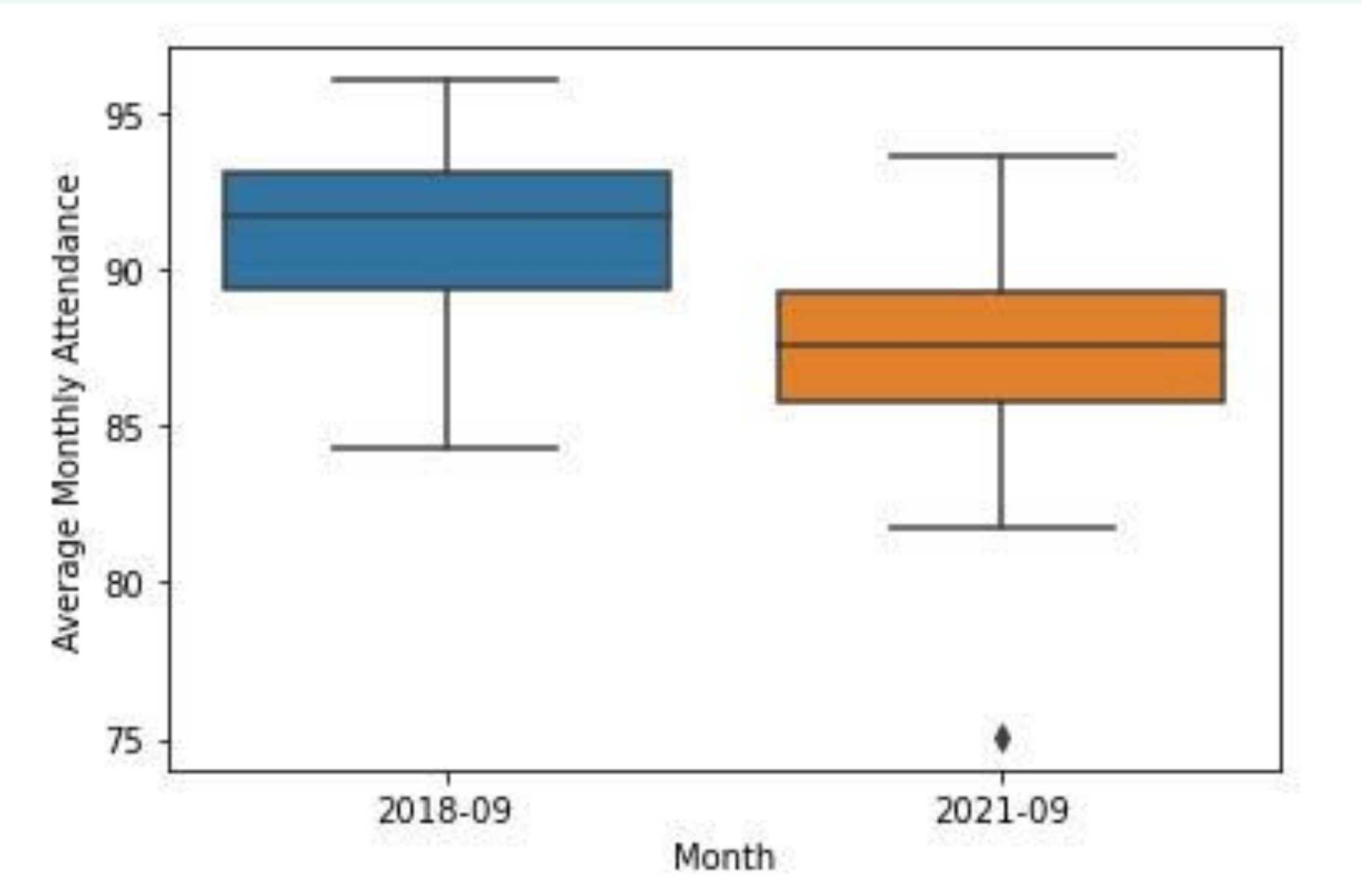
Demographic and attendance datasets from 2018-2021 were obtained from the New York City Open Data Portal. Data illustrated total student enrollment and attendance rates, and was categorized by NYC district, borough, and school. Student attendance rates were further subcategorized to demonstrate whether students engaged in fully remote, in-person, or blended learning.

Note: There is data missing from September 2020 - December 2020.



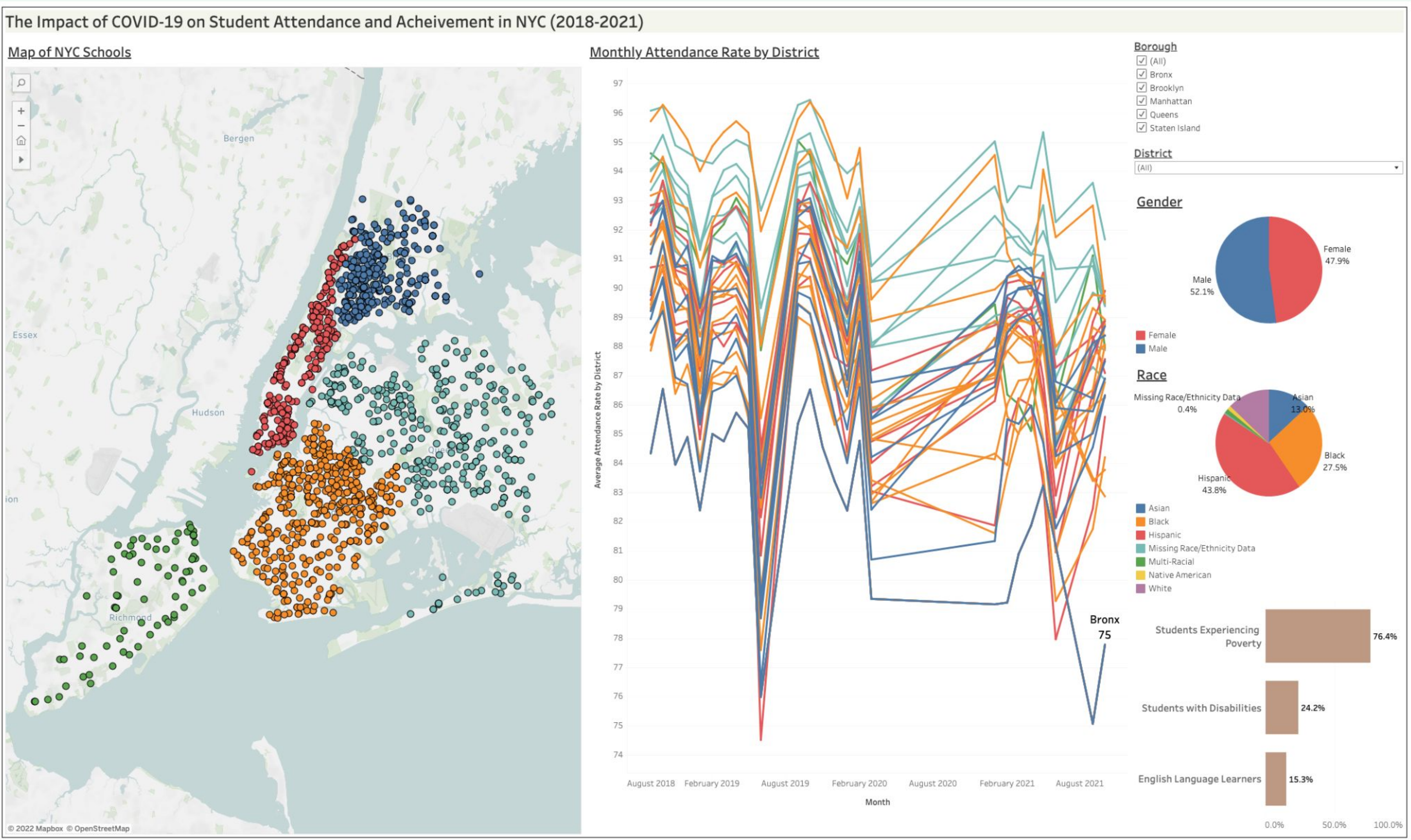
Data Analysis

Initial data cleaning, aggregating, compiling, and analysis was conducted using Python relying heavily on the Pandas package. One main question we wanted to answer was how attendance was affected by the pandemic. To do this, we compared the average monthly attendance rate for all school districts both before and during the pandemic, that is from September 2018 and September 2021. We found that there is a clear decrease in average attendance in the two time frames, about a **decrease of 4%** on average. This was further confirmed by a statistical t-test.



Interface

Geographic location, attendance, and demographic datasets were joined to create an interactive dashboard using Tableau (view it [HERE](#)). In this dashboard, you can drill down by borough and district to identify trends in attendance across different communities.



*Demographic data is from the 2019-2020 School Year, the latest data available to the public

Conclusion & Next Steps

Through our analysis, we identified trends in attendance data to bring awareness to the concern of students falling behind in their studies. The fallout from the pandemic threatens to depress this generation’s prospects and has potential to constrict students’ academic and economic opportunities in the future. While the necessary learning approach will be dictated by the current status of the COVID-19 case levels, next steps in our project would be to identify which learning styles produce the highest attendance rates and determine possible factors for attendance rate discrepancies (race, socioeconomic status, etc.).