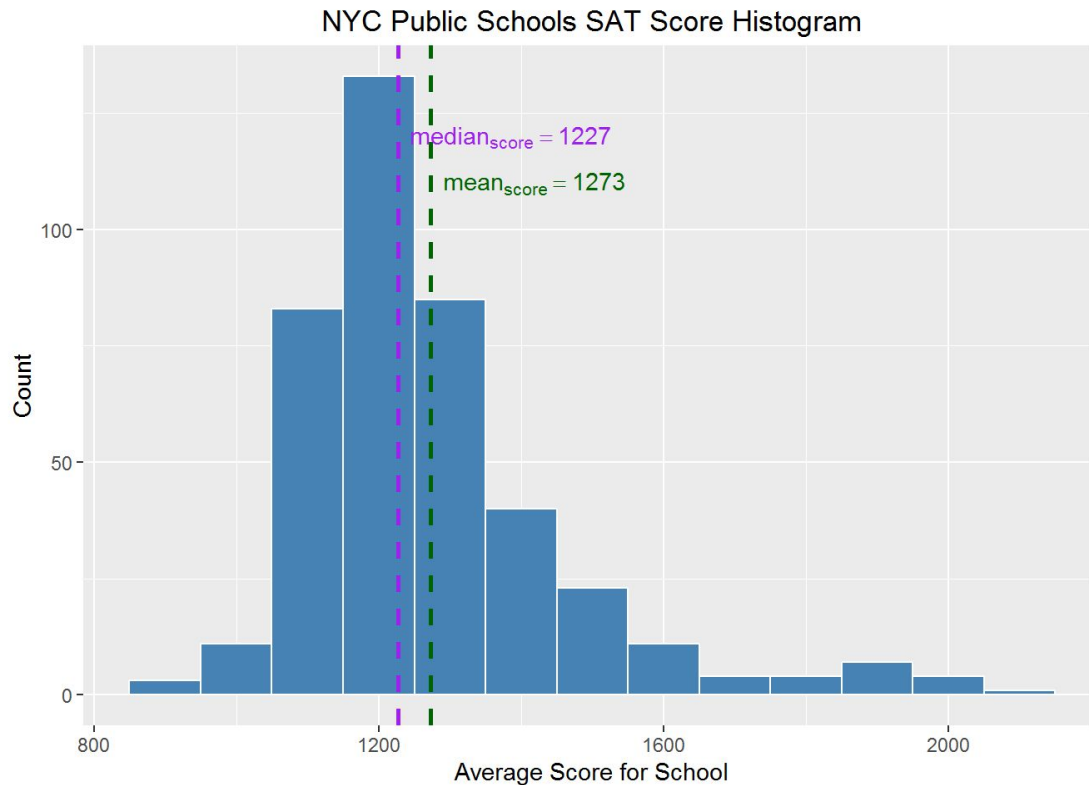


# Analyzing SAT data on NYC public schools

Joseph van Bemmelen

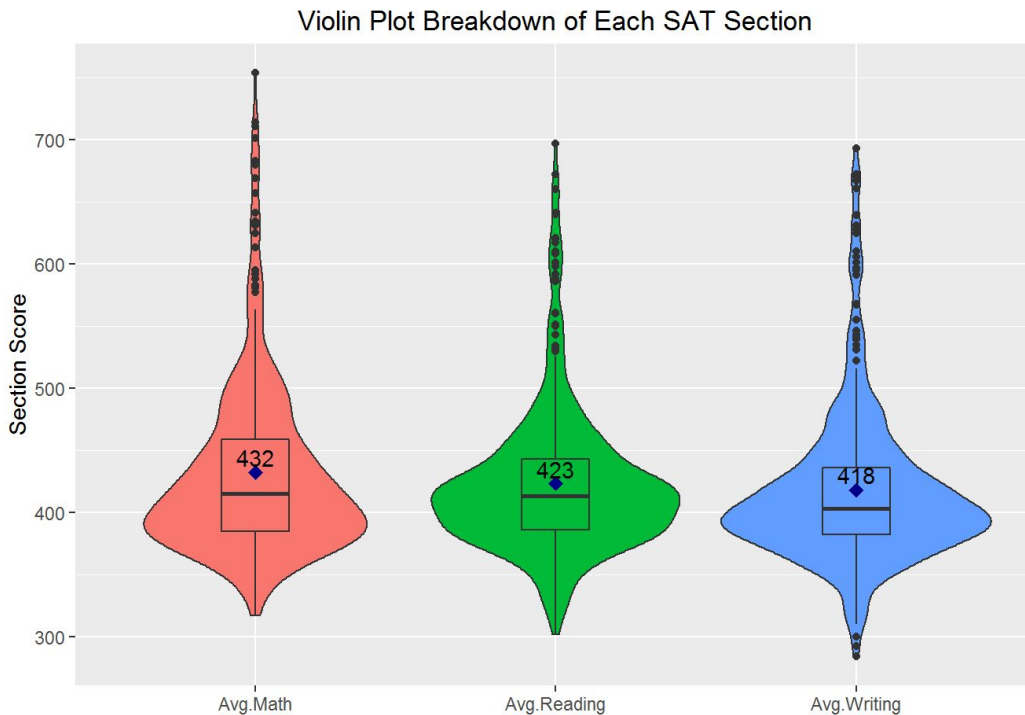
# Data Overview

##	function	value
## 1	min	924.0000
## 2	max	2144.0000
## 3	mean	1273.2494
## 4	weighted average	1240.0318
## 5	median	1227.0000
## 6	std dev	190.0625



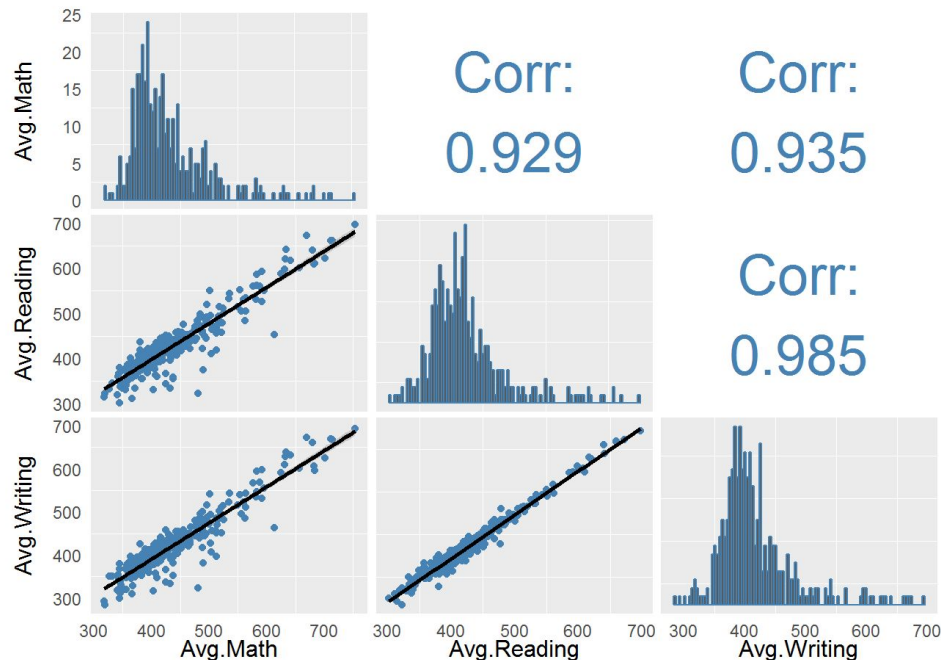
# Breakdown By Section

##	Function	Value
## 1	W.A. Math	465
## 2	W.A. Reading	446
## 3	W.A. Writing	441
## 4	Median Math	415
## 5	Median Reading	413
## 6	Median Writing	403
## 7	Std. Dev. Math	70
## 8	Std. Dev. Reading	60
## 9	Std. Dev. Writing	63

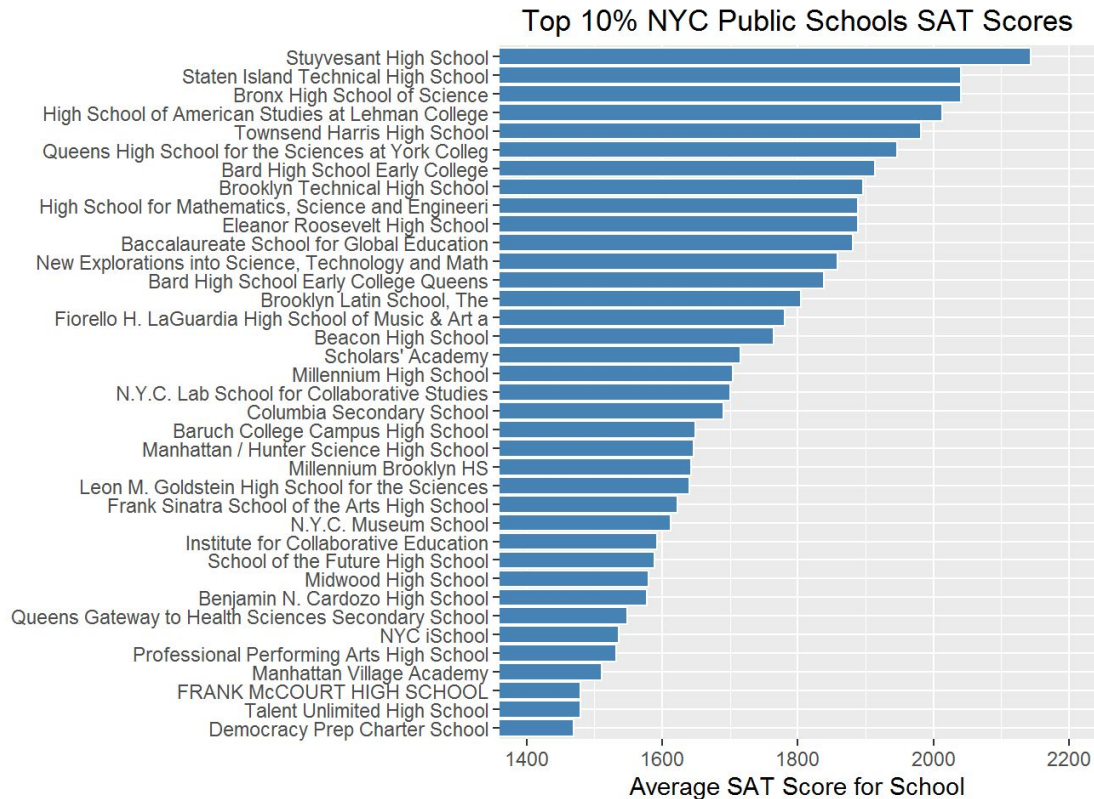


# Correlation Between Section Performance

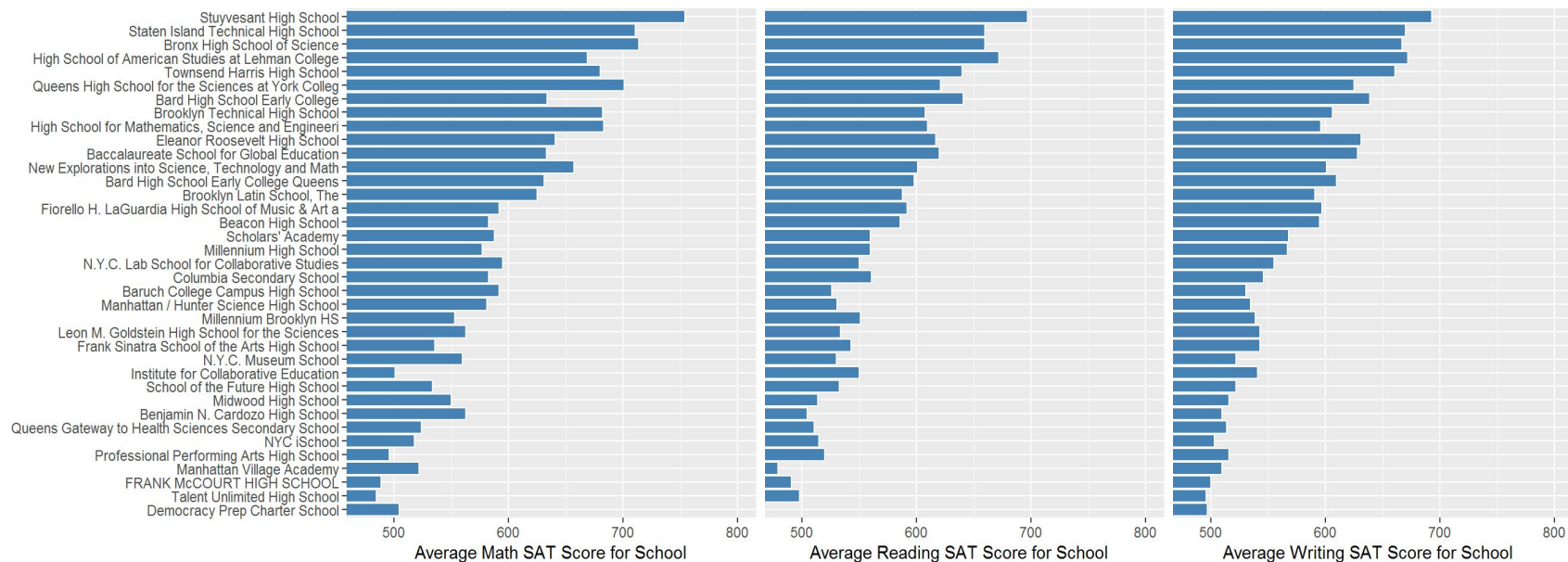
```
##           Avg.Math Avg.Reading Avg.Writing
## Avg.Math      1.0000000  0.9292445  0.9350696
## Avg.Reading  0.9292445  1.0000000  0.9851384
## Avg.Writing  0.9350696  0.9851384  1.0000000
```



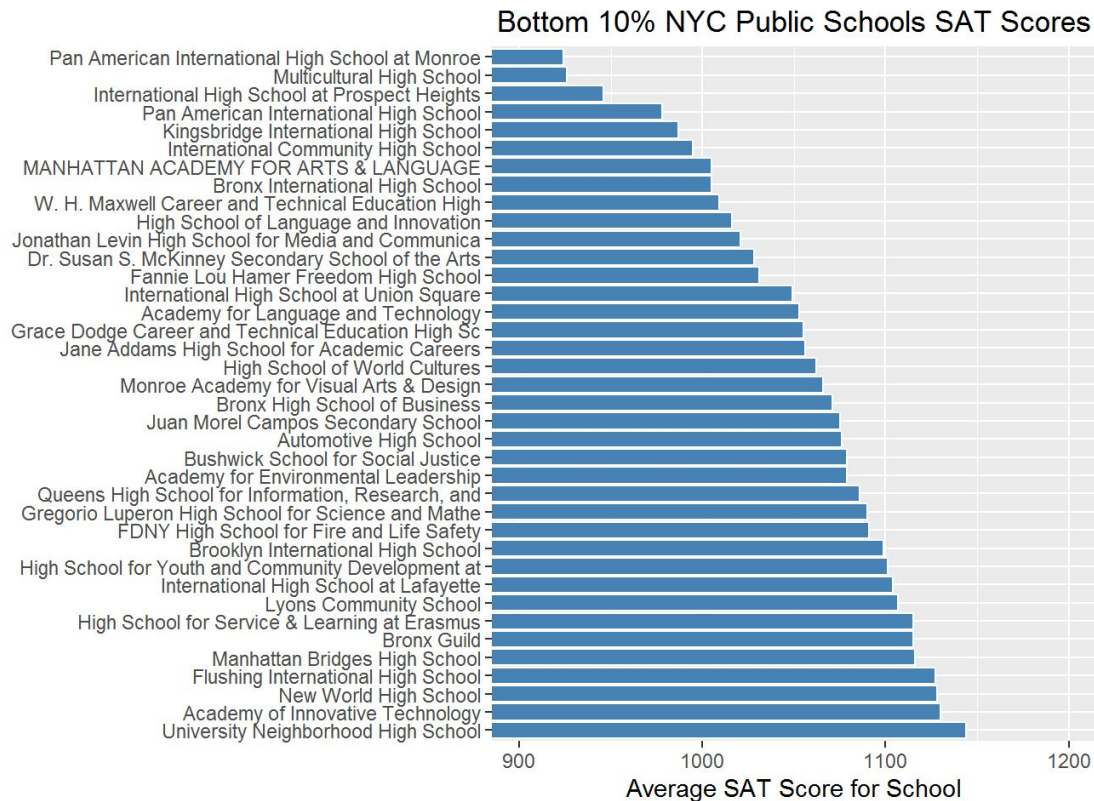
# Top NYC Public Schools



# Top Schools Section Breakdown

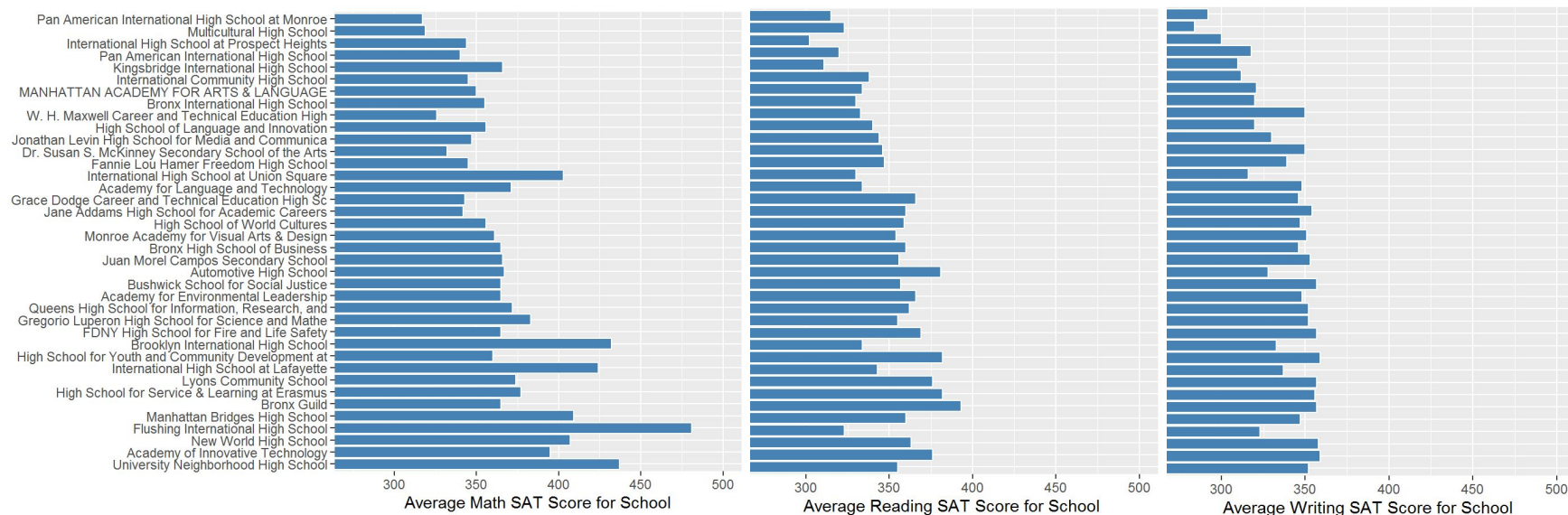


# Bottom NYC Public Schools



Note: a small but significant number of schools have "NA" for their SAT score (16.7%) and are not included

# Bottom Schools Section Breakdown



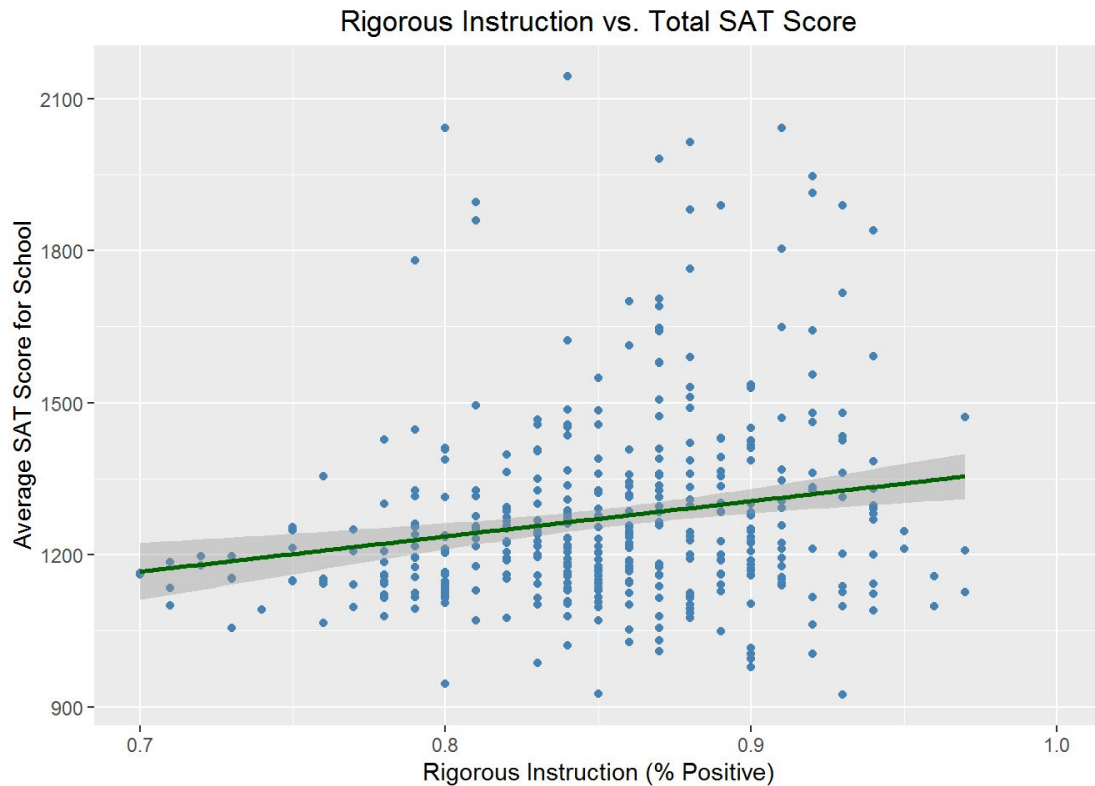
Note: a small but significant number of schools have "NA" for their SAT score (16.7%) and are not included



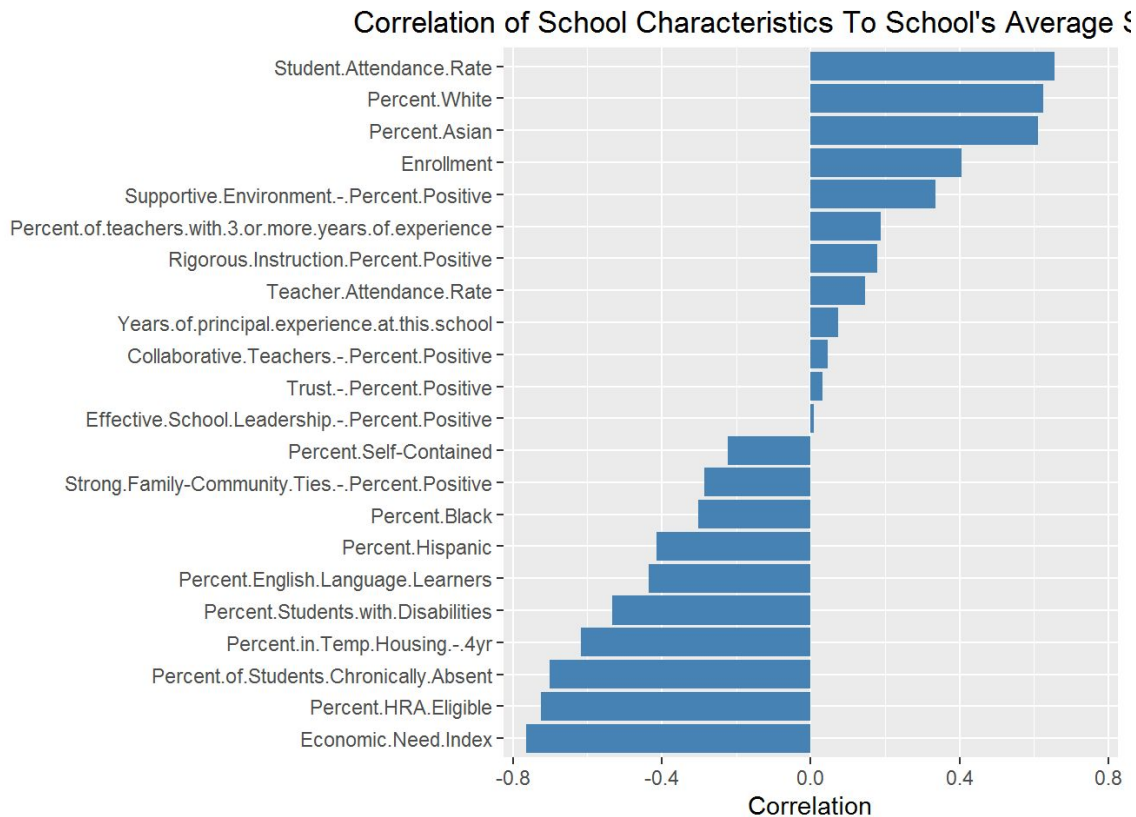
# School Characteristics

```
## [1] "Enrollment"  
## [2] "Rigorous.Instruction.-.Percent.Positive"  
## [3] "Collaborative.Teachers.-.Percent.Positive"  
## [4] "Supportive.Environment.-.Percent.Positive"  
## [5] "Effective.School.Leadership.-.Percent.Positive"  
## [6] "Strong.Family-Community.Ties.-.Percent.Positive"  
## [7] "Trust.-.Percent.Positive"  
## [8] "Percent.English.Language.Learners"  
## [9] "Percent.Students.with.Disabilities"  
## [10] "Percent.Self-Contained"  
## [11] "Economic.Need.Index"  
## [12] "Percent.in.Temp.Housing.-.4yr"  
## [13] "Percent.HRA.Eligible"  
## [14] "Percent.Asian"  
## [15] "Percent.Black"  
## [16] "Percent.Hispanic"  
## [17] "Percent.White"  
## [18] "Years.of.principal.experience.at.this.school"  
## [19] "Percent.of.teachers.with.3.or.more.years.of.experience"  
## [20] "Student.Attendance.Rate"  
## [21] "Percent.of.Students.Chronically.Absent"  
## [22] "Teacher.Attendance.Rate"
```

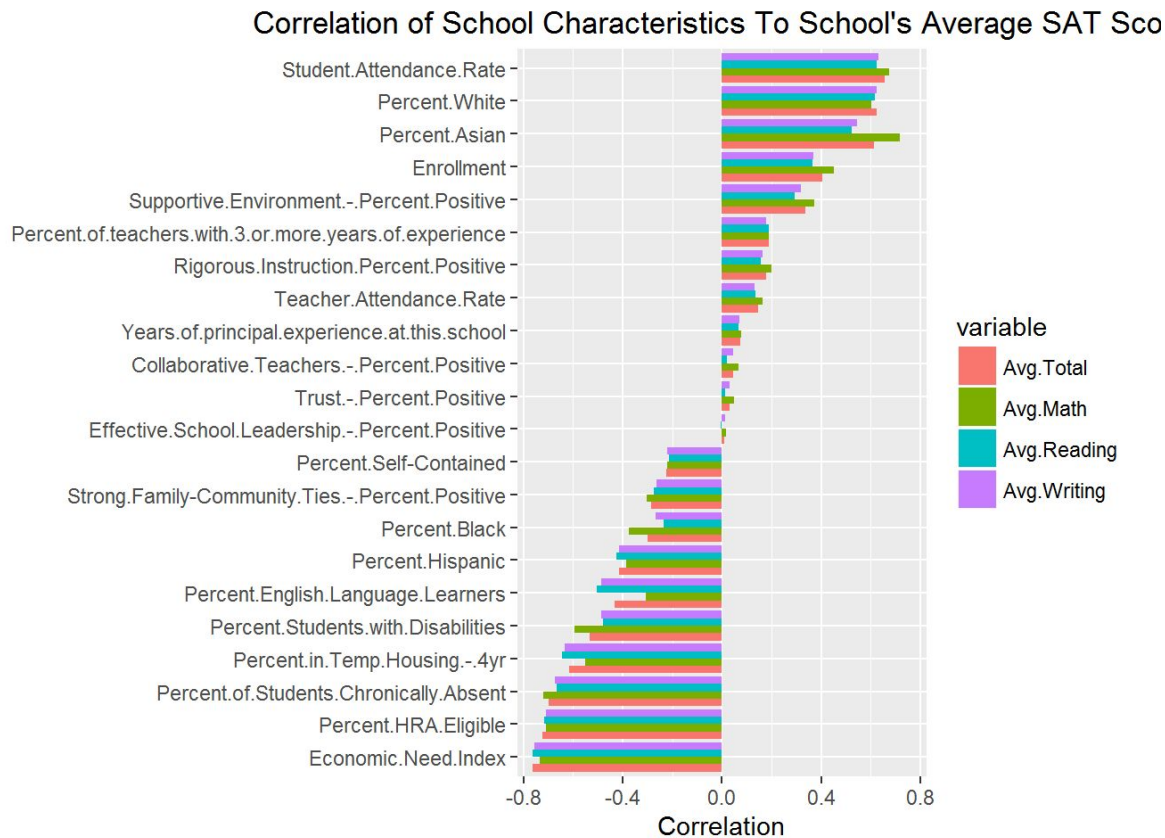
# Is rigorous instruction the most correlated?



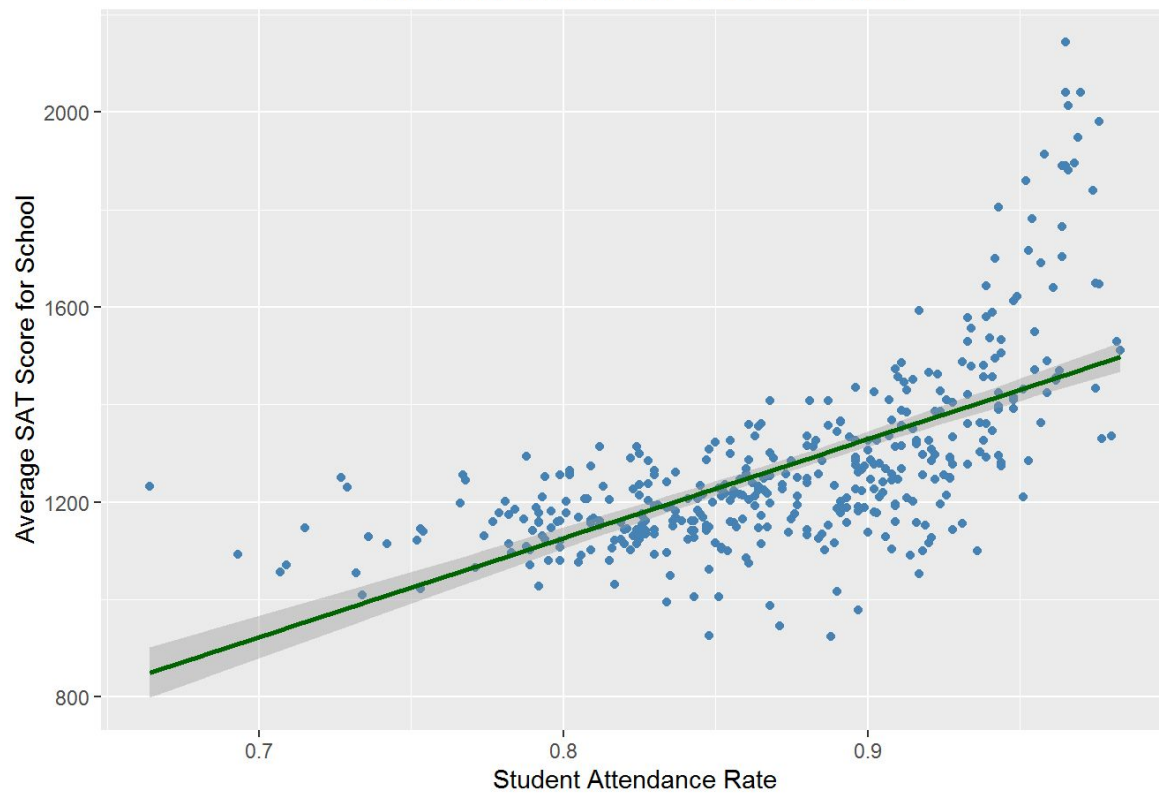
# Correlation of Characteristics To Average SAT Score



# Correlation Breakdown By Section



Student Attendance vs. Total SAT Score



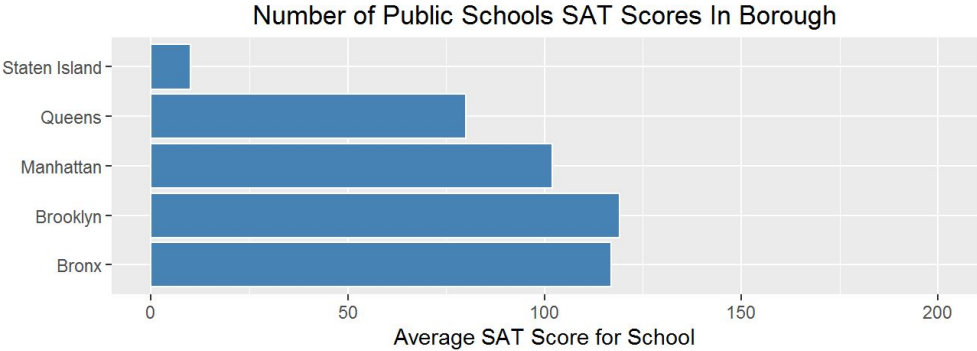
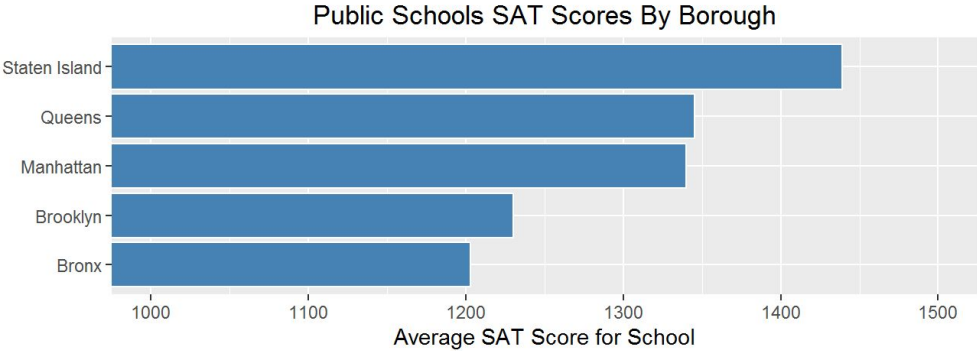


As per the NYCBOE:

*The Economic Need Index reflects the socioeconomics of the school population.*

*It is calculated using the following formula:  $\text{Economic Need Index} = (\text{Percent Temporary Housing}) + (\text{Percent HRA-eligible} * 0.5) + (\text{Percent Free Lunch Eligible} * 0.5)$*

# Score Breakdown By Borough



# Further Questions

How can we isolate specific characteristics for further testing?

Do other cities have similar correlations?

What is the SAT score trend for each school compared to previous years?

How closely are SAT scores linked to Regents scores?

Is there data available for NYC charter schools?

Is there other data available that could allow additional analysis?