New York State Test

Shiny Interface

# Each year the New York City Department of Education administers State Tests to most of the 1.1 million children that attend public schools in the city. The NYC DOE publishes test score results that measures Common Core Math and English results separately with data reduced into 4 categorical levels . . .

1 far below proficient  
2 below proficient  
3 proficient  
4 above proficient

where 3 & 4 are considered to be passing scores for a grade level.

A number of other categorical and hierarchical dimensions are published as well which group this dataset by Boro, District and School and by Race, Gender, Need, ELL proficiency and disability. The main inference that I’d like to explore with my proposed graphical interface would be a visualization of the correlation between test score performance and geography.  Filters are to permit the comparison of school clusters constrained by particular attributes.  One question that this tool can elucidate is which factors geographic and demographic correlate to leading and lagging performance.

My proposed two will have two visualizations, as outlined below. A GPS map showing district and school level data being investigated and a linear model of this data being compared to a baseline of reference data. So one might for example be interested in comparing passing rates of ELA test scores in Brooklyn grades 3-8 against the same filter citywide. The model would highlight the districts being investigated and provide the linear model with a scatterplot of schools.

GPS GEOGRAPHIC LOCATION MAP OF SCHOOLS:  
-Data Set: <https://data.cityofnewyork.us/Education/School-Point-Locations/jfju-ynrr>

-Highlights districts and schools being compared

-Uses a color gradient to show lower-to-higher test scores.

-Highlights district colors by area, school colors by long/lat point.

-Indicates size of school by size of point.

LINEAR MODEL:

-Data Set: <http://schools.nyc.gov/Accountability/data/TestResults/ELAandMathTestResults>

-Using NY State Test dataset for NYC schools scores

-Create two subsets -  (1) a datum subset of scores to be compared against

(2) an indicator subset of scores to compare to the datum

-Filtered by . . .

* ELA or Math test
* Screened School
* Grades 3-8
* Pass Rates 1-4
* Geography:  Citywide, Boro, District, School

ADDITIONAL ATTRIBUTES (if time permits):

-Separate tabs for base data

* Lunch - as a measure of relative income
* Gender
* Ethnicity
* SWD - as a measure of special education needs
* ELL - as a measure of language needs

-Dynamic Linear Model showing the relationship between scores