
ISyE 2028 – Basic Statistical Methods - Fall 2015
Bonus Project: “Big” Data Analytics
Proposal

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PROBLEM

Correlation between standardized test scores (such as the SAT/ACT) and first year college Grade Point Average (GPA)

How predictive of success in college are SAT scores? More precisely, what is the correlation between high school SAT scores and first-year college grade point average? (The appropriateness of GPA as a measure of success is also open to question. Grades, for example, often depend critically on the courses taken.) More than 800 four-year colleges and universities do not use the SAT or ACT to admit substantial numbers of bachelor-degree applicants. Are standardized tests such as the SAT a valid predictor of academic achievement in college?

GATHERING / ANALYZING DATA

There are many studies available online related to standardized test scores and first year performance in college that I can utilize. In addition, I have created an online survey form that will be shared among classmates as well as college graduates to gather additional data. I will model the relationship between the two factors (test scores and GPA) using linear regression. With the results, I hope to find out if the standardized test scores or other factors (such as high school GPA) are more valuable tools for predicting future college performance.

SAMPLE RESOURCES

<http://files.eric.ed.gov/fulltext/ED527216.pdf>

<http://senate.ucsc.edu/committees/cafa-committee-on-admissions-and-financial-aid/cafa-admissions/comprehensive-review/SATGPA.pdf>