
ISyE 2028 – Basic Statistical Methods - Fall 2015
Bonus Project: "Big" Data Analytics
Proposal (or Final Report)

Netflix And Study
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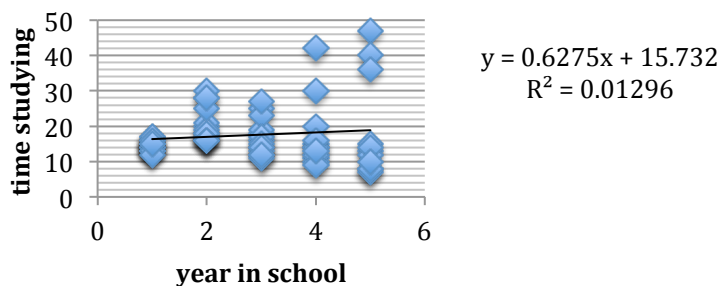
In my three years at Georgia Tech I, like many other busy college students, have found that one of the best ways to relax and relieve some of the stress of going to Tech is to check out my brain for a while by watching a few shows or a movie on Netflix, a popular streaming site. Talking with my peers about the amount of time each of us spent per week on it lead me to take an interest in the viewing habits of my peers to see if there is any correlation between the amount time a person studies and spends on Netflix and the person's age, major, and study habits.

Observations I had made as well as my own behavior led me to form my hypothesis, stating that as a student gets older, he or she will study less and watch more Netflix. I also hypothesized that non-STEM majors would study less and watch more Netflix than those students studying in the STEM field.

I tested this hypothesis in several ways. First, I posted a link to an anonymous Google survey to several groups I am a part in at Tech, including my sorority and the Ramblin Reck Club. This survey had a few questions: What is your major?, What year are you?, Do you have access to a Netflix account?, How many hours do you spend studying per week?, and finally, How much time do you spend on Netflix per week? I received a total of 79 responses. Out of the 79 people, 69 had access to a Netflix subscription, so this is the number I worked with in my subsequent calculations. Of these 69 people, 26 were not in STEM majors and 43 were, so I used these samples for my calculations as well as the 69 total.

First of all, I observed all of the relevant data as a whole. I graphed the years the students were in school against the amount of time they spent studying and watching Netflix. For the studying graph, I found a positive correlation and a low R-squared value of 0.01296, which is the

year in school vs. time spent studying



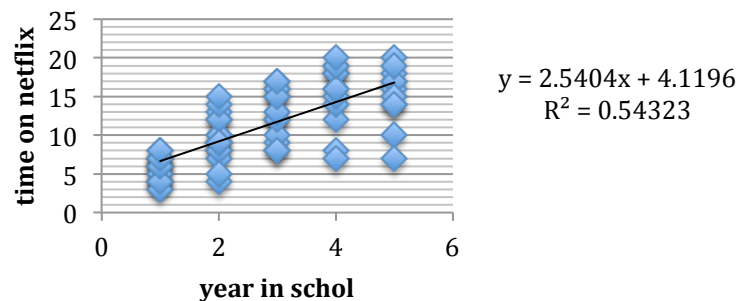
opposite of what I had predicted. However, when the graph is observed, it should be noted that it appears to follow a negative linear trend downwards, with a few high points for large amounts of time studied by fourth and fifth years. This makes a good deal of sense, because many seniors are part of extensive senior design

projects that require much more of their time. Also, the mean amount of time spent studying for freshmen is 14.64 hours, less than the average of around 20 hours of studying for second years. This also makes sense because many freshmen take mostly core requirement classes which are often far easier than more major specific ones.

Next, I looked at the amount of time students spent watching Netflix plotted against their year in school. From this, I observed a result that agreed with my hypothesis, with a positive correlation and a decent value for r-squared, showing that there is enough evidence to concur that as a student gets older, they

spend more time streaming entertainment. This also makes sense because the Atlanta area is newer and more exciting for many younger students, so they are more likely to spend more time exploring, while older students like myself become more prone to staying in as they get older.

year in school vs. time spent on netflix



Additionally, to test my theory that students in STEM majors at Tech spend more time studying and less time watching Netflix than non STEM majors, I created four confidence intervals. I found with 95% certainty that the true mean hours that students in STEM majors study per week is between 24.9 and 22.57 hours and between 8.8 and 11.53 hours per week streaming entertainment, while non STEM majors spend between 13.36 and

18.1 hours per week studying, and between 10.66 and 14.57 hours on Netflix. These numbers supports my hypothesis.

In order to help strengthen my results, I would like to change a few things. Although I believe my sampling was relatively unbiased, I would like to increase my survey size, which would decrease my variance. I think it would also be beneficial to survey more non-STEM majors to increase the sample size to above the minimum of 30, allowing it to be more statistically significant. Additionally, I think that I should include the use of any other streaming site, such as Hulu Plus that work the same way as a Netflix account and might apply to more people.

Although the first part of my findings went against what I had hypothesized showing that there is no real correlation between a student's year in school and how much he or she studies, I am pleased to find that the rest of my hypotheses were proved to be correct that more Netflix is watched as year increases and that STEM majors study more and watch less. This makes sense because it has been something I noticed among my peers, and I believe that what the data shows is indicative of the habits of my generation. These results also can be cited in future debates over which majors are the most difficult.