ISyE 2028 – Basic Statistical Methods - Fall 2015
Bonus Project: "Big" Data Analytics
Academic Performance of Georgia Tech Student Athletes
Final Report

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Once I joined Georgia Tech I began powerlifting and had to find a way to manage my time spent studying and in the gym. I found it difficult at times to finish my homework, while maintaining my gym schedule. Powerlifting is an individual sport outside of Georgia Tech, so in that sense I was lucky to choose when and how to train, unlike the team sports and sports within the school. I know many other student athletes, whether it be intramurals, club sports, or the Georgia Tech athletic department, face similar challenges. Their performance academically varies depending on (1) hours spent for their sport, (2) hours spent in class and/or studying, and (3) what they are studying. My initial hypotheses were that students from the athletic department will have lower GPAs that students involved in club sports or intramurals, and spend less time in class and studying overall. I also believed that most students in the athletic department are not within the engineering or computer science school.

To gather information, I conducted a survey by creating a Google Form and posting it on the Georgia Tech Facebook groups. I calculated the average GPAs for students involved with the athletic department, intramurals, and club sports to be 3.31, 3.39, and 3.47, respectively. Prior to this, I hypothesized the GPAs would be around 2.8, 3.1, and 3.3. After conducting a hypothesis test, using a significance level of 0.01, I found that only my hypothesis for the average GPAs of students in intramurals could be considered, and the other two should be rejected.

In a recent article posted on the Georgia Tech Athletic website (http://www.ramblinwreck.com/genrel/110415aaa.html) student athletes have a recorded mean 3.00 GPA for three straight semesters. Because my sample size for

student athletes is very small, it does not represent the entire athlete population well. However, my results did change my view that there are student athletes with high GPAs and in the engineering school. The article reinforces my results and I found a majority of responses were GPAs greater than a 3.00 from students who are studying chemical engineering, material science engineering, biology, and computer science. I was also surprised to see that many students involved in sports in general are able to maintain high GPAs. For example, the student who spends the most time per week (18-24 hours) for their club sport (powerlifting) has one of the highest GPAs (3.93) and is majoring in computer engineering. My sample sizes for intramurals (23) and club sports (43) were much larger and therefore a better representation of student athletes.

Also in my survey, I asked approximately how many hours each student spent in class, studying outside of the class, and for the sport. Prior to my study, I wanted to recognize which sports require the most commitment. I wanted to also see the difference in how much time is put into studies between different majors.

After gathering data, I created bar graphs for each type of athlete (athletic department, intramurals, or club sports) that showed students in the athletic department spend less time studying (most students spend 0-6 hours studying outside of class per week) and, as expected, more time playing their sport (most students spend 18-24 hours playing the sport. Only again since the sample size is small, I do not think the data for hours in class is a good representation of other student athletes because people take varying amounts of hours per semester. Most students in intramurals spend 12 -15 hours in class, 6-10 hours studying outside of class, and 0-6 hours playing the sport per week. Most students in club

sports spend 6-12 hours in class, 10-14 hours studying outside of class, and 6-12 hours playing the sport per week. This shows that clubs sports require a little more commitment than intramurals, as more hours are spent for the sport.

In conclusion, students in the athletic department spend more time for their sport than studying and have lightly lower GPAs compared to other student athletes. To improve my results, I would get a larger sample size for all categories, especially athletic department. I would also study the differences between commitment for different sports and majors. Because my sample sizes were relatively small compared to the population of the school and the answers varied so much, I could not draw concrete conclusions for a single sport or major.

Survey Data:

https://docs.google.com/spreadsheets/d/1KZjsXy5iicwV6GPEODD86DSkRri3qWAIVGS-1JdixtI/edit?usp=sharing