Research Paper # 2: Pick Your Own Topic

Due on May 1, 11:59PM.

Under Course Materials, click on Research Paper 2 and submit it there.

You can submit it early. It is now available for submission.

Write a 2-3 pages(at least 800 words) paper on a statistic topic of your choosing. Your paper needs to include at least one topic that is an application of a conceptthat we covered this semester, for example, applications of linear regression, normal distribution, probability, hypothesis testing, etc… See below for some sample topics. Your paper needs to have an analysis or explanation of at least one math/statistical equation. **Please cite all your references. Specifically, you must use in-text citations for any information you obtained from another source, including math formulas and discussions of those formulas.**

Below is a list of possible topics that you can use. **You are not required to use any of these topics.**

1)Simpsons’ Paradox. This paradox is actually covered in our textbook in the first chapter.

2) Birthday Paradox. This interesting paradox says, for example, that in a room of just 30 people, the probability that at least two people have the same birthday is 70%. That number goes up to 90% with 40 people and 97% with just 50 people. (Limit 4 students)

3)Monty Hall Problem.

4) Two-Child Paradox.

5) The 2016 Presidential Election.

6) Sampling Methods for Polling and Surveys.

7) Applications of Hypothesis Testing.

8) Applications Standard Deviation/ Normal Distribution. For example, Nate Silver’s Fivethirtyeight uses z-scores to analyze relative performance of sports teams and athletes.

9) Applications of Regressions. There are other models beside the linear models we discussed in this class.

10) Central Limit Theorem.