





[New Attempt](#)

- Due Jan 16, 2022 by 11:59pm
- Points 100
- Submitting a text entry box or a file upload

Module 1 Project



-  **Syllabus** (<https://northeastern.instructure.com/courses/97784/assignments/syllabus>)
-  **Modules** (<https://northeastern.instructure.com/courses/97784/modules>)
-  **Resources** (<https://northeastern.instructure.com/courses/97784/pages/course-resource-page>)
-  **Assignments** (<https://northeastern.instructure.com/courses/97784/assignments>)



Assignments

Analysis of a Betting Strategy in Sports

This assignment is **due** by **Sunday**, 11:59 pm EST.

Overview and Rationale

In this project you will apply probability theory to a betting scenario. This will help you think about how to use the theory to get a better understanding of the probability of an event happening, and how to use software to help you with the related calculations.


Problem:

Suppose that New York Yankees and Boston Red Sox (two American League baseball teams) are scheduled to play a best of three series. The winner of the series will be the first team that wins two of the three games. The probability that the Red Sox win a game in their home stadium is 0.59 and the probability that Yankees win their home game is 0.56. Next, suppose that you place a bet on each game played where you win \$1000 if the Red Sox win and you lose \$1050 if the Red Sox lose the game. Assume that the outcomes of the games are independent of each other. This project has 4 parts.



Instructions

Open Module 1 project to begin. It includes the detailed instructions needed to complete the assignment. Note: Neither Excel Macros nor R packages should be used.

- [Module 1 Project \(https://northeastern.instructure.com/courses/97784/files/13296528?wrap=1\)](https://northeastern.instructure.com/courses/97784/files/13296528?wrap=1)
- [Module 1 Student Excel Workbook \(https://northeastern.instructure.com/courses/97784/files/13296530?wrap=1\)](https://northeastern.instructure.com/courses/97784/files/13296530?wrap=1) 
(https://northeastern.instructure.com/courses/97784/files/13296530/download?download_frd=1)

- (<https://northeastern.instructure.com/courses/97784/files/12522215?wrap=1>) to complete project.
- [APA Format.pdf](https://northeastern.instructure.com/courses/97784/files/13296529?wrap=1) (<https://northeastern.instructure.com/courses/97784/files/13296529?wrap=1>)

Project Rubric (2)



Criteria	Ratings				Pts
R (or Excel): Problem Modeling & Set-up	20 pts Exceeds Standard Completely and concisely modeled the problem in Excel (or R) for each method	16 pts Standard Accurately modeled the problem in Excel (or R) for each method	10 pts Approaching Standard Correctly modeled the problem in Excel (or R) for each method, but the model lacks detailed insight into the problem or the set-up is awkward.	5 pts Below Standard Modeled the problem in Excel (or R) for each method, but there are some gaps in the problem modeling and setup	20 pts
R (or Excel): Problem Solution & Accuracy	40 pts Exceeds Standard Efficiently obtained correct and accurate solutions in Excel (or R) by using the appropriate analytic tools of the software	32 pts Standard Obtained complete and accurate solutions in Excel (or R) by using the appropriate analytic tools of the software	20 pts Approaching Standard Obtained correct solutions in Excel (or R) using the appropriate analytic tools of the software, but the application of the tool is awkward.	10 pts Below Standard Obtained a solution in Excel (or R) by using the appropriate analytic tools of the software, but the solution is not complete.	40 pts
Word/Report: Problem Description & Introduction	10 pts Exceeds Standard Provides a thorough and concise summary of the problem descriptions and introduced the problem using rich and significant ideas	8 pts Standard Provides an accurate and succinct summary of the problem descriptions and problem introduction	5 pts Approaching Standard Provides an accurate summary of the problem descriptions and problem introduction, but the description is too wordy or not succinct	2.5 pts Below Standard Provided a summary of the problem descriptions and problem introduction, but it is inaccurate or incomplete	10 pts

Criteria	Ratings				Pts
Word/Report: Description of Problem Analysis	10 pts Exceeds Standard Provides a thorough and precise description of the analytic concepts and theories used in analyzing the problem	8 pts Standard Accurately describes the analytic concepts and theories used in analyzing the problem	5 pts Approaching Standard Describes the analytic concepts and theories used in analyzing the problem, but description lacks appropriate detail or precision	2.5 pts Below Standard Describes the analytical concepts and theories used in analyzing the problem, but descriptions are incorrect or the analytical concepts and theories are incorrect	10 pts
Word/Report: Description of Conclusions	10 pts Exceeds Standard Provides conclusions and results obtained in the project using a high level of critical thinking and reasoning	8 pts Standard Provides relevant conclusions and results obtained in the project that reflect critical thinking and reasoning	5 pts Approaching Standard Provides conclusions and results obtained in the project, but not all conclusions or results are relevant to the problem or not all conclusions reflect good reasoning	2.5 pts Below Standard Provides conclusions and results obtained in the project, but they are irrelevant and reflect a lack of critical thinking	10 pts
Word/Report: Writing Mechanics, Title Page, & References	10 pts Exceeds Standard Completely free of errors in grammar, spelling, and punctuation; and completely correct usage of title page, citations, and references. The report contains a minimum of 1000 words	8 pts Standard There are no noticeable errors in grammar, spelling, and punctuation; and completely correct usage of title page, citations, and references. The report contains a minimum of 1000 words	5 pts Approaching Standard There are very few errors in grammar, spelling, and punctuation; and completely correct usage of title page, citations, and references. The report contains a minimum of 1000 words	2.5 pts Below Standard There are more than five errors in grammar, spelling, and punctuation; or the usage of title page, citations, and references are incomplete; or the report contains less than 1000 words	10 pts

Criteria	Ratings				Pts
					Total Points: 100

