

9.4 Unit 3 Project Report

Name _____

Group Member _____

Group Member _____

Group Member _____

Your report should be typewritten and double-spaced. Use this page as a cover sheet. Each individual must submit his/her own project report.

I will grade your report using the Intellectual Standards on the back of this page.

The report should include the following parts.

Introduction: Write a paragraph to introduce your reader to the topic you have chosen. State the research question (see the module). Describe the source of the data. List and define (see the module) the variables you used in the analysis. Classify each variable by type (categorical or quantitative).

Data sources:

- **Movie.txt**
This data set describes 75 movies listed in the top 100 USA box office sales of all time. Data was taken from www.IMDb.com, www.rottentomatoes.com, and www.metacritic.com in Spring 2014.
- **Child Development.txt**
Look in the StatCrunch file under Data → Properties → Description
- **gradebook.xls**
A grade book from an Introduction to Statistics course at Carnegie Mellon University.
- **Body Measurements.txt:**
Exploring Relationships in Body Measurements, Grete Heinz, Louise J. Peterson, and Carter J. Kerk. Journal of Statistics Education, Volume 11, Number 2 (200).

Data: Present the quantitative data that you used in an organized and well-labeled table.

Exploratory Data Analysis: Analyze the data using all relevant, significant, and appropriate numerical summaries and graphs (with clear labels). Your explanations should reflect the use of Unit 3 concepts and multiple perspectives:

Scatterplots with clear labels that facilitate easy visual comparison

Form, direction, strength, and outliers of scatterplots

Explanatory and response variables

Regression equation

Prediction

r and r^2

r^2 is the proportion of the variation in the response variable that is explained by the explanatory variable.

Summarize in words what your numerical summaries and graphs are telling you.

Conclusion: Answer the question based on your analysis of the data. Clearly explain the logical connection between your exploratory data analysis and your conclusion..

Intellectual Standards

Clarity forces the thinking to be explained well so that it is easy to understand. When thinking is easy to follow, it has Clarity.

Accuracy makes sure that all information is correct and free from error. If the thinking is reliable, then it has Accuracy.

Precision goes one step further than Accuracy. It demands that the words and data used are exact. If no more details could be added, then it has Precision.

Relevance means that everything included is important, that each part makes a difference. If something is focused on what needs to be said, there is Relevance.

Logical means that the thinking is consistent and the conclusions follow from the evidence. When something makes sense step-by-step, then it is Logical.

Significance compels us to include the most important ideas. We don't want to leave out crucial facts that would help to make a point. When everything that is essential is included, then we find Significance.

Multiple Perspectives include graphs, numerical summaries, verbal (word) descriptions, and calculations. Use all perspectives that are relevant.

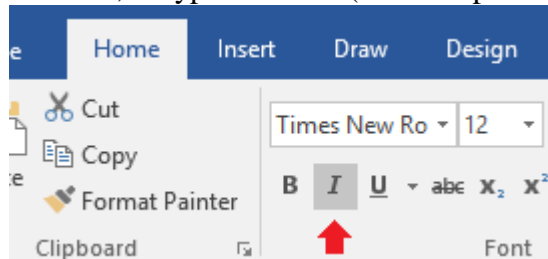
Microsoft Word tips

Microsoft Word (and Excel) is installed on all computers at LMC. Also, as a student, you can install Microsoft Word (and Excel and the rest of MS Office) for free on five of your scomputers.

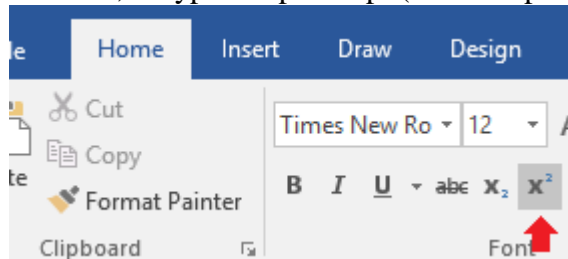


Sign in to your email @insite.4cd.edu and click on in the upper right corner. Scroll down and click on Office 365, then click on Software.

In Word, to type in *italics* (for example x or y or r), use



In Word, to type a superscript (for example the exponent in r^2), use



To copy data from StatCrunch to a table in Word, highlight the data in StatCrunch and use ctrl-C for copy. Then go to Word and use ctrl-V for paste. Highlight the data in Word, and go to Insert → Table → Convert Text to Table (as shown in the picture to the right). Then click OK.

You can use the Design and Layout menus (top center) to format the table.

