

MA 345- PROJECT REPORT

Project 1: Data Exploration

Due date for submission of the written report: **February 27, 2020.**

For the format of this report or article, please follow the directions below: The project should include

1. description of the research question(s)
2. description of data-what and how collected
3. presentation of statistical analysis of data including
 - i) what analyses were used and why?
 - ii) results containing a small number of tables or graphs
 - iii) the appropriateness of the assumptions underlying your methods should be addressed.
 - iv) Conclusions
4. limitations of analysis/data
5. Further questions and suggestions.

In this typed paper:

- Your R results should appear as tables or figures in the text (for the most important ones).
- All output should be clearly labelled, and, edited to remove non-essential portions. Do not simply put a pile of output through which the reader will have to wade to find the relevant analyses. As a general rule, do not include any output which you do not mention, describe or discuss in the text of your paper.
- I also would like to see the CODE(s) you have used for your data analysis in the appendix.

FORMAT OF THE PROJECT PAPER

First page

Title Page: Title/Author/Name of the Institution (Logo if possible)/Date

Title page should also contain

Abstract

- A list of key words that describe the project and identify the major research concept should be submitted with the report.
- main objectives.
- statistical methods used.
- summary of most important results.
- major conclusions.

Second page

Table of Contents and Lists of Figures and Tables: The Table of Contents should list section numbers, titles, second level headings and their page numbers.

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Then Sections' part should begin...

Section 1. Introduction

should contain the answers for the following questions

- What is the problem? What data are available?
- Why is it important?
- What work has been done on this type of problem before?
- What type of statistical approach are you going to take?

Section 2. Background (if necessary)

- If the problem studied requires a time-consuming description, it may be better to give only a rough outline in the Introduction and to give details in this section.
- If the project involves a lot of 'new' statistical methodology, then it can be covered in this section.

Section 3. Statement of Problem and Statistical Analysis Approach

- Clear & repeatable description of how you tackled the problem.
- Describe statistical methods used.
- Enough information for a knowledgeable person to reproduce the results you are about to present.
- Give results - fitted models, parameter estimates, confidence intervals, ANOVA tables etc. as appropriate.
- Say what statistical package was used, but do not spend time describing the particular operation that package. (E.g. Do not say, "The data were loaded into R, then such function was used...".)

Section 4. Results

- Actual findings, significant output of tests & analysis
- Must be readable, not pages of computer output
- Include problems encountered, believability of results, accuracy estimates.

Section 5. Summary & Conclusions

- Restate problem, approach & results
- Conclusions you drew (& why)
- Utility of results
- Subject for further study

REFERENCES

APPENDICES

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- Rest of the tables/graphs
- Computer Listings (R codes)

TABLES AND FIGURES

- Tables and figures must be numbered sequentially and titled individually.
- Place tables and figures as close as possible to the text in which they are mentioned.
- Use “Figure 1,” not “Fig. 1,” or “Table 1.” in the text, as well as for captions.
- Unless generated by the researcher, a source should always be cited.