My Final College Paper

A Thesis

Presented to

The Division of Mathematics and Natural Sciences

Reed College

In Partial Fulfillment

of the Requirements for the Degree

Bachelor of Arts

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(Mathematics)

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Andrew P. Bray

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I want to thank a few people.

Preface

This is an example of a thesis setup to use the reed thesis document class (for LaTeX) and the R bookdown package, in general.

Table of Contents

List of Tables

List of Figures

Abstract

The preface pretty much says it all.

Second paragraph of abstract starts here.

Dedication

You can have a dedication here if you wish.

Chapter 1

If you have more two advisors, un-silence line 7

Placeholder

Chapter 2

Literature Review

2.1 Probability Theory (establishing definitions)

2.1.1 Random Variables & Distributions

2.1.2 LLN & CLT

2.2 Statistical Inference

```
- frequentist v Bayesian
- sampling distribution
```

2.3 Survey Methodology

```
- Sampling Procedures
    - Methods (section likely mixed rather than divided like so)
        - Simple random sampling
        - Stratified random sampling
        - Systematic sampling
        - Cluster
        - Stratified sampling
    - Advantages/Disadvantages
- Data Collection
    - Designing survey (sample unit, sample size, hypothesis/motivation role)
    - Survey method (brief list e.g. interview, questionnaire)
- Data Analysis
    - Hypothesis testing
    - Inference
```

2.4   Non-Probability Sampling

```
- Sampling Procedures
    - Methods
        - Convenience sampling
        - Consecutive sampling
        - Judgmental Sampling
    ##Advantages/Disadvantages
- Data Collection
    - Designing Survey (sample unit, sample size, hypothesis/motivation role)
    - Survey method (brief list e.g. interview, questionnaire)
- Data Analysis
    - Hypothesis testing
    - Inference
```

2.5   Election Polling

```
- Purpose
- Design
    - Population
        - Sample selection
    - Methods
    - Sample size
    - Question design
        - Wording impacting response
- Data collection
    - Implementation
    - Errors
        - Sampling Error
        - Non-Sampling Error
            - Questionaire design
            - Interviewer effects
            - Responder effects
- Data analysis
```

Chapter 3

tbd

Chapter 4

Tables, Graphics, References, and Labels

Placeholder

4.1 Tables

4.2 Figures

4.3 Footnotes and Endnotes

4.4 Bibliographies

4.5 Anything else?

Conclusion

If we don't want Conclusion to have a chapter number next to it, we can add the `{-}` attribute.

More info

And here's some other random info: the first paragraph after a chapter title or section head *shouldn't be* indented, because indents are to tell the reader that you're starting a new paragraph. Since that's obvious after a chapter or section title, proper typesetting doesn't add an indent there.

Appendix A

The First Appendix

This first appendix includes all of the R chunks of code that were hidden throughout the document (using the `include = FALSE` chunk tag) to help with readibility and/or setup.

In the main Rmd file

In Chapter 4:

Appendix B

The Second Appendix, for Fun

References

Placeholder