An Rticles Template for the Transport Research Board Annual Meeting

Alice Anonymous
Corresponding Author
Graduate Student
Some Institute of Technology
alice@example.com

Bob Security
Assistant Professor
State University
bob@example.com

Derek Zoolander
Professor
Some Institute of Technology
derek@example.com

Word Count: 684 words + 1 table(s) × 250 = 934 words

Submission Date: November 15, 2024

ABSTRACT

The Transportation Research Board (TRB) has unique and seemingly arbitrary requirements for manuscripts submitted for review. These requirements make it difficult to write the manuscripts quickly, and no existing LaTeX style comes close to fooling the guidelines. This represents an initial effort at creating a template to meet the requirements of TRB authors using LaTeX, R, Sweave, and/or other literate programming software.

Keywords: Transportation, Travel Behavior,

TRANSPORTATION RESEARCH BOARD ANNUAL MEETINGS

TRB has greatly simplified the submissions to its system, meaning that this template is no longer strictly required. However, there is a typical format that most people still use by default, and this template implements that change.

FEATURES

The template has a number of features that enable quick and painless manuscript authoring.

Mathematics

Standard pandoc / LaTeXmath environments are available. For example, the probability of an individual choosing alternative i in a multinomial logit model is

$$P_i = \frac{exp(V_i)}{\sum_{i,j \in J} exp(V_j)} \quad (1)$$

Equations with a `\label{eq:label}` can be referred to later in the text with `\ref{eq:label}`, such as Equation 1.

Title Page

The template will automatically create a title page with the authors in the listed order. Near the bottom of the title page, TRB requires a count of the manuscript's words and tables. The YAML header information contains a `wordcount` key where this can be encoded. The number of tables is counted automatically on build; a default 250 words per table can be overriden with the `wordspertable` YAML key.

The LaTeX template available from `https://github.com/chiehrosswang/TRB_LaTeX_tex` contain automatic word counters that have not been implemented in this `rticles` template. Authors can use the R Studio word count add-in available from `https://github.com/benmarwick/wordcountaddin`.

Page Layout

The document has 1 inch margins as required, with the author's names in the left heading and the page number in the right. The running header information is set with the `runningheader` YAML key. Paragraphs leading sections and subsections are not indented, while all subsequent paragraphs in that section are. Section heading types are defined as outlined by the old TRB Author's Guide.

The document is single-spaced in 12 point Times font. Times New Roman is a proprietary font and is therefore not available by installation in open-source software. While the differences between Times variants are negligible, Times New Roman itself can be used in Mac OSX by compiling under `xelatex`.

Figure and Table references

The document can use standard pandoc referencing tools for in-text citations to figures and tables. If an R code chunk outputs a figure, the figure number can be referred to with `\@ref(fig:chunkname)` where `chunkname` is the name of the chunk that prints the figure. For example, Figure @ref(fig:figure-example) shows a default figure made by the R chunk below.

```
# Generate some sample data, then compute mean and standard deviation
# in each group
```

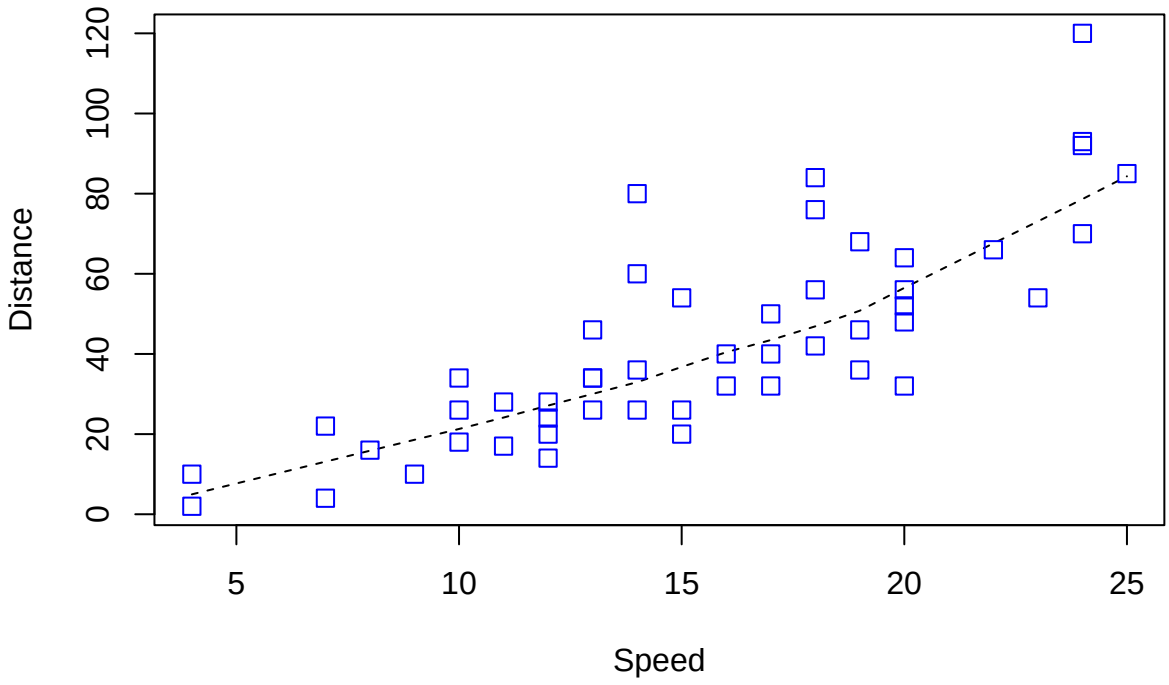

FIGURE 1 Generic plot.

```
Speed <- cars$speed
Distance <- cars$dist
plot(Speed, Distance,
     panel.first = lines(stats::lowess(Speed, Distance), lty = "dashed"),
     pch = 0, cex = 1.2, col = "blue")
```

The template setup chunk sets `echo = FALSE` for the entire document, as printing code listings would not usually be appropriate or needed for a TRB article. But the option is there!

The same referencing logic works for tables, with the `tab:` prefix on the chunk name instead of `fig:` used for figures. Table @ref(tab:table-example) has a basic table. We recommend the `kableExtra` package for formatting publication-ready tables with greater control than the default `knitr::kable()` function.

Bibliography styles

TRB still wants numbered, unsorted citations beginning on a new page. The template is configured to use `natbib` with the `unsrtnat` citation style, with some additional logic to use parentheses instead of brackets. The YAML key `biblio-style` will allow the authors to select a different citation format, but this is not recommended at the moment. Citations use the pandoc logic. Including the reference in brackets `[@reference]` will print only the numeric reference; e.g. (1, 2). In-

TABLE 1 Example Table

	mpg	cyl	disp	hp	drat	wt
Mazda RX4	21.0	6	160	110	3.90	2.620
Mazda RX4 Wag	21.0	6	160	110	3.90	2.875
Datsun 710	22.8	4	108	93	3.85	2.320
Hornet 4 Drive	21.4	6	258	110	3.08	3.215
Hornet Sportabout	18.7	8	360	175	3.15	3.440

cluding the reference without brackets `@reference` will print the authors and then the numeric reference; e.g. Feynman and Vernon Jr. (1).

AUTHOR CONTRIBUTION STATEMENT

The authors confirm contribution to the paper as follows: study conception and design: A. Anonymous, D. Zoolander; data collection: B. Security; analysis and interpretation of results: A. Anonymous, B. Security; draft manuscript preparation: A. Anonymous. All authors reviewed the results and approved the final version of the manuscript.

ACKNOWLEDGEMENTS

David Pritchard posted the original versions of this template in 2009 and updated it in 2011, soon after TRB began allowing PDF submissions. Gregory Macfarlane and Ross Wang made adjustments to the template, and Ross Wang now maintains the LaTeXtemplate at `https://github.com/chiehrosswang/TRB_LaTeX_tex`. Gregory Macfarlane created the `rticles` template in 2021.

References

1. R.P Feynman and F.L Vernon Jr. The theory of a general quantum system interacting with a linear dissipative system. *Annals of Physics*, 24:118–173, 1963. doi: 10.1016/0003-4916(63)90068-X.
2. P.A.M. Dirac. The lorentz transformation and absolute time. *Physica*, 19(1-–12):888–896, 1953. doi: 10.1016/S0031-8914(53)80099-6.