

1 HOW TO PREPARE A GENERIC SCIENTIFIC MANUSCRIPT FOR

2 SUBMISSION USING MARKDOWN AND PANDOC

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Abstract

Purpose. If journal requires abstract sections, these can be included and made bold by including double asterisks `**section_name**` before and after each header. If these are not needed, simply do not include them, simple. **Methods.** Because of our selected font, we can easily include special characters directly into our markdown file and these will be rendered properly. This provides some motivation to find a text editor that has a good *character map* plugin. Personally, I have grown rather fond of the Atom editor, which has a `character-map` plugin that does the trick. by clicking on a hotkey, Alt-1, I can type the name of the symbol I am looking and it is inserted into my document. **Results.** So lets say I just pressed Alt-1 and typed `plusminus`. The item at the top of the list would be \pm , as expected. I hit Enter and it is inserted into my document. This makes it easy to say that, on average, my level of frustration drafting a manuscript has decreased by $77\% \pm 4\%$ since learning about Markdown and Pandoc. Also, scientific papers always sound fancier when you use Greek letters. So I will search for the letter `beta`, which gives me the special character β . Also, because Pandoc converts Markdown to PDF using LaTeX, it is amazing support for mathematical equations and the like. Most basic tutorials on LaTeX should cover the basics of math-mode (i.e. `$math stuff$`). **Conclusion.** This dummy manuscript and its accompanying files includes everything you need to generate a basic manuscript for submission. The rest of this paper will provide a brief overview of Markdown, Pandoc and the various parts that accompany this manuscript to generate the final result. I chose a simple approach and targeted generic formatting. Much more sophisticated manuscripts can be generated, but it is always a good idea to start small and simple.

Introduction

A guiding principle of Pandoc and LaTeX is to separate content from style. While this can be achieved in LaTeX, the actual document in which you write can be rather intimidating for the uninitiated. It is filled with commands, for example `\usepackage[margin=3cm]{geometry}`, and typing even a simple document can become cluttered with function calls to make text bold (`\textbf{my text}`) or italic (`\emph{my text}`), or just trying to write a percent sign (`\%`). While LaTeX is more powerful and is what is used by many publishers to typeset the journals we publish, it can be overwhelming for people who have any used Microsoft Office or Libre Office.

Markdown is a simple markup language initially created to write content for the web. Pandoc, on the other hand, is a powerful Swiss Army knife of a tool that converts documents from one format to another. Importantly, Pandoc adds functionality that allows us, researchers and scientists, to generate professional looking manuscripts. And yes, Pandoc handles references and citations in a clean and efficient way; more on this later.

This means that we can now focus on the content of our manuscripts when we are writing them. We will let Pandoc do the heavy lifting of creating a professional looking manuscript that we can share with co-authors and submit for review. And since we are using Markdown to write our manuscript, we can use a simple text editor, and the text that we write will be quite straight forward, free of LaTeX-style function calls.

While we may use various formatting styles when writing notes, reports, letters, etc., things are rather straightforward when preparing scientific manuscripts.¹ The main types of inline formatting I use are italics, super- and subscript. I also include tables and figures, and very occasionally use footnotes. For the footnote I just used, I typed `[^1]` in the spot where I want the superscript number 1 to appear, and then, somewhere else in the document (I chose immediately after the paragraph as this makes it easy to find if I need to change it) add `[^1]`: At least for the type of papers I find myself writing. This text has to be on its own line, with an empty line before and after. To make something italic, simply add an asterisks on either side. For example, typing this, `*this will be slanted*` will result it text that appears as *this will be slanted*. Superscript is achieved by surrounding the text with the carat symbol. For example, `sum^adults^` will generate $\text{sum}^{\text{adults}}$. Similarly, the tilda symbol is used for subscript: `sum~children~` will appear as $\text{sum}_{\text{children}}$ in the final document. We will cover tables and

¹At least for the type of papers I find myself writing.

71 figures later in this document. The key thing here is that making these style changes can be done later,
72 *en masse*. If you don't remember how to make something italic, bold or superscript, don't worry. Just
73 leave yourself a note [TODO: make this text bold] and keep your writing flow going. Remember, we
74 are trying to separate content from style. Stay in the flow and don't get distracted. I have included a
75 brief review of key inline formatting (Table 1) and special characters (Table 2) at the end of this paper.

76 **Methods**

77 It turns out we need to add and specify a few things to Pandoc in order to obtain a presentable
78 manuscript. As you can see, these details are not included in this file, the `manuscript.md` file. That is
79 because we are trying to separate content from style (and distractions). So this file is where we should
80 write our manuscript. The details that specify things like the font, whether or not we want numbered
81 sections, the addition of line numbers, etc are in small helpers files. Lets go over these now.

82 **Participants**

83 To generate the PDF output, we simply need to run `pandoc -d header.yaml` on the command line.
84 The content of this file could be placed in a `yaml` header at the top of this document, but that would
85 be distracting to use and confusing to our co-authors who might not be familiar with Markdown and
86 Pandoc. So, we extracted the `yaml` header and placed it in its own file: `header.yaml`. Note that `yaml`
87 files need to be formatted based on some simple rules, so if you want to change anything, make sure
88 you adhere to proper formatting style; a quick Google search will locate a quick tutorial if you need
89 one.

90 In `header.yaml`, we find two commands related to referencing. One specifies the Bibtex file that con-
91 tains our references the other specifies the referencing style we want to use to format our references
92 (note that a line that starts with `#` is a comment and has no effect).

```
# References and Reference Style
csl: journal-of-neurophysiology.csl
bibliography: references.bib
citeproc: true # required in pandoc 2.14
```

93 `csl` stands for Citation Style Language. As stated on its website:

94 “Welcome to the open source Citation Style Language (CSL) project! Our goal is to facili-
95 tate scholarly publishing by automating the formatting of citations and bibliographies. We
96 develop the Citation Style Language and maintain a crowdsourced repository with over
97 10,000 free CSL citation styles.”

98 We will have more to say about references later in this article.

99 The next part of the `header.yaml` file specifies the input and output files.

```
# Names of Input and Output Files
```

```
input-file: manuscript.md
```

```
output-file: manuscript.pdf
```

100 These will need to be changed if you decide to rename the base Markdown file, or if you want a specific
101 name for the outputted PDF file.

102 Then our `header.yaml` file has three difference ‘include’ statements. These allow us to include the
103 content of specified files into the header, or preamble, of the LaTeX file that will generate our article,
104 as well as before and after the actual content of our article, the stuff if `manuscript.md` is added to the
105 LaTeX file. What these files contain will be described in the following sub-sections.

```
# Addition to LaTeX Template
```

```
include-in-header: header.tex # Change margin and line spacing
```

```
include-before-body: before_body.tex
```

```
include-after-body: after_body.tex
```

106 The next section in the `header.yaml` file specifies some Pandoc variables that will control various
107 aspects of how are article is generated. In order to properly process special characters typed directly
108 into our text editor, rather than specifying a special LaTeX command, we are using the `xelatex` pdf-
109 engine. To have these special characters appear in our This font was selected as it has good support
110 for special characters.

```
# LaTeX Specifications
```

```
pdf-engine: xelatex
```

```
variables:
```

```
documentclass: article
```

```
mainfont: "DejaVu Serif"
```

```
sansfont: Arial
classoption:
  - 10pt # 11pt, 12pt
```

111 The final part of `header.yaml` contains instructions and a commented out line related to adding num-
112 bered sections to our article.

```
# To have numbered sections, uncomment the following line.
# But we don't want our Title or Abstract to be numbered,
# so we will add {.unnumbered} next to our Title and Abstract
# headers, separated by one space.
# Example: # Abstract {.unnumbered}

# number-sections: true
```

113 **Experimental set-up**

114 The file called `header.tex` contains LaTeX commands that Pandoc will insert in the preamble of the
115 LaTeX it generates to make our manuscript.

```
\usepackage[margin=3cm]{geometry}
\usepackage{lineno}
\usepackage{setspace}
\doublespacing
%\singlespacing
%\onehalfspacing
```

116 If you want to change the margins of the PDF document that is generated, you can change the value
117 passed to the `geometry` packaged. Next, we instruct LaTeX to use the `lineno` package, which will
118 allow us to add line numbers to our document. Finally, we load the `setspace` package, which gives us
119 access to three functions that we can use to specify the line spacing we want for our manuscript. The
120 default is double line spacing, but by commenting out `\doublespacing` with a `%` and uncommenting
121 one of the other lines we can use single line spacing or one and a half line spacing.

122 Protocol

123 The next file we have is `before_body.tex`. The content of this file is inserted after the
124 `\begin{document}` command in the LaTeX file, but before the actual content –the stuff in this
125 file– is added (by the way, I used two dashes in a row -- to get the two emdashes in this sentence).

```
\thispagestyle{empty}  
\vspace*{2 cm}  
\begin{linenumbers}
```

126 The first line tells LaTeX to not add a page number to the first page, our title page. The second line
127 adds some vertical space, which allows the title of our article to not be at the very top of our title page.
128 The final line tells LaTeX to start numbering the lines in our document.

129 If you did not want numbered lines, you could delete or comment out `\begin{linenumbers}` in this file,
130 as well as `\end{linenumbers}` that we add to the very end of our document via the `after_body.tex`
131 file.

132 Statistical analysis

133 The file `after_body.tex` includes a single LaTeX command: `\end{linenumbers}`. As mentioned
134 above, delete or comment out this command if you do not want line numbers

135 Results

136 Effect of font on blood pressure

137 Many researchers love to hate referencing in manuscripts. Many people default to proprietary software
138 like Endnote or Reference Manager, but many good quality free alternatives are available such as
139 Mendeley, JabRef, Zotero, etc. Regardless of what reference manager program you choose, the key
140 functionality that we want is for the program to automatically generate and update a `.bib` file that
141 contains our references.

142 I often manually generate my `.bib` Bibtex files when I know they will be relatively small. However, I
143 have recently (re)started using Zotero, and I am liking it. I can add references when I am browsing for
144 articles, using the Zotero plugin for the Firefox web browser. I can also search for references from

145 within the Zotero desktop application. Also, having an online accounts allows me to view and sync
146 my library on any computer. I recommend the Better Bibtex plugin for Zotero, which adds additional
147 functionality.

148 The key things is that you have a Bibtex file that contains your references. Each reference has a key,
149 which we use to refer to the reference. Below is an example of a reference in a Bibtex file:

```
@Article{Diong2015,  
  Author="Diong, J. and Herbert, R. D. ",  
  Title="{[I]s ankle contracture after stroke due to abnormal intermuscular force transmission?}",  
  Journal="J. Appl. Biomech.",  
  Year="2015",  
  Volume="31",  
  Pages="13--18",  
}
```

150 The key of this reference is Diong2015. Therefore, I can refer to this paper by preceding it's key
151 with the @ symbol. To include a reference to the article that will be included in parentheses, I would
152 type [@Diong2015]; this would result in the following (Diong and Herbert, 2015). If was to refer to
153 the paper by Diong and Herbert (2015) in a sentence, as I just did, I would omit the square brackets
154 (i.e. @Diong2015). You can also include several reference keys in the square brackets. For example,
155 typing [@Diong2012a; @Diong2012b; @Diong2015; @Diong2019] will generate (Diong et al., 2012a,
156 2012b, 2019; Diong and Herbert, 2015). Note the semi-colon and space between each reference key.

157 Sometimes we want to add text in the parentheses with our reference. This can be achieved by
158 simply including the desired text before or after the reference. As an example, lets look at the follow-
159 ing line of text: contractures are a major problem [see @Diong2015 for a review]; it looks like
160 this when processed by Pandoc: contractures are a major problem (see Diong and Herbert, 2015 for a
161 review). More complex examples are also possible, such as [see @Huijing2003, Figure 1; also
162 @Bojsen-Moller2010, Table 2], which results in the following (see Huijing and Baan, 2003, Figure
163 1; also Bojsen-Moller et al., 2010, Table 2). Some of these styles of referencing will be depending on
164 the referencing style you are using.

165 Now, if you skip to the end of this manuscript, you will find a References section where all the refer-
166 ences I just cited will be properly formatted according to the style that I specified in the header.yaml

167 file.

```
# References and Reference Style
```

```
csl: jneurophysiol.csl
```

```
bibliography: references.bib
```

168 Here we are using a Citation Style Language file that formats our references for submission to the
169 Journal of Neurophysiology. There are literally thousands of such files available for download, or you
170 can generate your own. That means, if your paper gets rejected from one journal and the next journal
171 you want to submit to use a different referencing style, simply find the appropriate .csl file, add it to
172 the project folder and change the appropriate line in your header.yaml file.

173 **The relationship between hyphens and cholesterol**

174 It is worth mentioning that no reference manager software is perfect. When references are downloaded
175 from the web, the formatting is not always correct, or they may not include the abbreviated version of a
176 journal title. Thus, it is up to the authors to ensure the content of the .bib file is correct. For example,
177 the title of the paper sometimes comes in title case, where each word is capitalised. This needs to be
178 fixed in the Zotero and the .bib file updated.

179 **Causal relationship between Markdown use and happiness**

180 In many text editors, you can split your screen and have two documents open. Thus, you could have
181 your paper open on one side and your .bib file open on the other. And when you want to enter a
182 reference, you could search the .bib file for the reference and identify its key. As you probably have
183 already realised, this is less than ideal.

184 A better way to work is to use the Atom editor and the autocomplete-bibtex plugin. By pointing
185 this plugin to the .bib file that is generated and regularly updated by Zotero, we can add references
186 without having to move our hands from the keyboard. All we have to do is type @ and start typing and
187 a list of possible references will appear. We can scroll through the available choices or we can keep
188 on typing to narrow down our search. Then, when we have found the reference we were looking for,
189 we simply click on Enter and the reference key is added. We can see an example of this action in
190 Figure 1, where I am adding this reference (Diong and Herbert, 2015).

191 Discussion

192 This group of files provides a relatively simple approach to drafting scientific articles. It can be adapted
193 to suite various requirements, yet remains relatively simple and clutter-free. Because of this, it remains
194 a simple article template and may not suite everyone's needs. In preparing this group of files, sev-
195 eral other examples were reviewed; some were relatively simple while others were sophisticated and
196 generated publication-quality PDF documents, some based on the official LaTeX packages provided
197 by publishers. The benefit of this series of files is that it can easily be adapted to other types of docu-
198 ments, such as study notes, lab notebooks, blog posts, etc. The building blocks are simple and most
199 key parts are explained in the present article.

200 Not using maketitle

201 Many introductory tutorials on using Markdown and Pandoc to generate nice looking PDF add the title,
202 authors, abstract and date in the `yaml` header. This way, these entries are passed to LaTeX and used
203 as part of the `\maketitle` command.

204 I tried several ways to get `maketitle` to generate something that would be acceptable as a manuscript
205 title page. Using an additional LaTeX package I was able to specify more than one affiliation per author.
206 However, allowing room to specify the details of the corresponding author and also various other items
207 such as word count, running title, key words, etc was not straightforward. There were hacks that
208 hijacked the `date` variable, but these were less than optimal. Also, I was aiming for a simple approach
209 that did not require writing a new LaTeX template file with newly defined (or redefined) functions.

210 Therefore, I opted to bypass `maketitle` completely. This allows for great flexibility as to what appears
211 on the title page. The downside is that I had to use several manual line breaks (i.e. `\`) and a call to
212 `\newpage` in this, the main Markdown document.

213 Tables

214 Tables can be found at the end of the manuscript, and they are rather easy to prepare, especially if
215 you use Pandoc-style tables (see `manuscript.md` for example of how to prepare tables). To add a
216 table caption, simply allow for one empty line and start the caption with 'Table:.'; this will be recognised
217 by Pandoc as a table caption and will be properly formatted in LaTeX. To ensure LaTeX produces the

218 table in the expected location, use `\clearpage` between each new table you add.

219 **Figures**

220 Figure are also found at the end of the manuscript and they too are easy to add to the manuscript.

```
! [Caption_goes_here] (figure.png) { width=10cm }  
! [Caption_goes_here] (img/figure.png) { height=10cm }
```

221 Add the full caption to your figure in the square brackets, but unlike tables, there is no need to add
222 'Figure' or something similar at the start. Pandoc, via LaTeX, will automatically add 'Figure' and the
223 appropriate figure number on the final PDF.

224 The figure can be located in the same folder as the Markdown file where you are drafting your article,
225 but it can also be located in a dedicated folder, such as `img`. In this case, simply include the folder
226 name before the figure name (the forward slash may need to be backslash for Windows users).

227 Finally, if you did not make your figures to exact size you want them to appear in the figure published
228 manuscript, you really should do this, you can specify the size of the figure by adding an additional
229 entry. Note that the entry goes between curly braces, with no space between the closing parenthesis
230 and the opening curly brace, and with spaces on either side of the size command. Various options are
231 possible, but the most sensible for manuscripts are to specify either the width or height of the figure.

232 **Writing with co-authors**

233 Now comes the \$1M dollar question: how to write a paper using this template with co-authors who
234 only know Microsoft Word? Well, there are a few options.

235 The best way would be to have your co-authors work directly on the Markdown file (`manuscript.md`),
236 where comments could be left in an agreed upon format, for example in `typewriter` font. In papers
237 than do not contain references to software or code, it is uncommon to use such a font, thus it would
238 be an easy way to leave comments |MH: I was wondering if we could expand on this point a
239 little, maybe providing an example of what such a comment would look like|.

240 Also, rather than emailing the files around, the manuscript could be version controlled using git and
241 hosted on GitHub or an internal GitLab server. With several co-authors, the person who is likely to give
242 you the best and detailed feedback should go first, and then other co-authors could add their changes

243 and comments after a few initial rounds between you and the other key authors (often your supervisor).
244 It would also be possible to have each co-authors create a branch in the git repository, do their work
245 their, and then make a pull-request. This allows for a nice, civilised conversation between the two
246 parties. A workflow around git is definitely not common in many fields, including my own, but it makes
247 total sense to have a lasting history of the manuscript in all its forms, and this without having dozens
248 of files with co-author initials appended at the end or `v1`, `v2`, `v3final`, `v3finalfinal` appended at the
249 end.

250 An alternative to having your co-authors use git is to email them the Markdown file and have them
251 email back their changes and comments. You can incorporate these changes yourself on a git branch,
252 and then merge them in to the main document. This will likely be needed for co-authors not familiar
253 with git.

254 Another less-than-optimal alternative is to use Pandoc to output a Microsoft Word `.docx` file. While
255 the formatting is not perfect, it is surprisingly good; definitely enough to have your co-authors revise
256 the manuscript. But what do you do when the document is sent back to you?

257 We can use Pandoc to convert our document back into a Markdown file. If you co-author used tracked-
258 changes, you have to option to `accept` them all or `reject` them all. You will likely want to `accept`
259 them all and add the modified file to a dedicated git branch, where you will be able to merge these
260 changes (accepting and rejecting the changes individually). One thing to not is that any comment you
261 co-authors left for you as Word comments will be lost.

```
% Example where all changes are accepted
```

```
pandoc --from=docx manuscript.docx --track-changes=accept -o revised_manuscript.md
```

```
% Example where all changes are rejected
```

```
pandoc --from=docx manuscript.docx --track-changes=reject -o revised_manuscript.md
```

262 Another option is to accept all changes, including comments, by using `--track-changes=all`. This is
263 likely not you want to do, as it actually embeds detailed notes about each change and comment made
264 in the document. Here is an example:

```
If [I added stuff.]{.insertion author="Martin Heroux" date="2021-07-08T15:22:24Z"}
```

This means that we can now focus on the content of our manuscripts when we are writing them.

```
[A comment.]{.comment-start id="0" author="Martin Heroux" date="2021-07-08T15:25:08Z"}  
[[]]{.comment-end id="0"}]{.insertion author="Martin Heroux" date="2021-07-08T15:25:08Z"}
```

Workflow in Atom

If you are new to all of this and don't have a preferred writing environment, you might be curious about my current tooling. Well, as you can see in Figure 1, I use the Atom editor. This is an open-source editor that to which you can add plugins (from the folks at Atom or the Atom community). You can use Atom to do your actual coding (if you code), but you can also use it to write your papers! As you can see, I have my files and folders visible on the left side, my main `manuscript.md` file open in one window, a rendered PDF in another window, and, along the bottom, a command-line terminal.

When I am in the flow of writing, I don't have the PDF visible, as it is distracting. It is too tempting to compile our cool document and see what it looks like. However, when you are in the final phase of preparing your manuscript, or when you are learning Markdown and Pandoc, it can be useful to see what the PDF output looks like.

As explained above, I run `pandoc -d header.yaml` on the command line to generate my PDF manuscript. With the PDF viewer plugin that I use (see Table 3) for details, the PDF auto-updates.

Submitting your revised, final manuscript

While you can usually submit a single PDF document to journals when first submitting your paper, they usually want your paper in a different format, including individual, high-quality figures. Oddly enough, publishers almost all use LaTeX to typeset journals, yet many journals do not accept LaTeX files to be submitted, or simply text file or Markdown files. Rather, they prefer Microsoft Word `.docx` files, a complex file type that mixes formatting and content, where the formatting will be stripped away by the typesetters.

So, what to do after you have received reviewer feedback on your first submission and the editor now demands the source files? You are lucky if you are allowed to submit a LaTeX file. Then, you can use Pandoc to output a `.tex` file. The next easiest thing to do is to use Pandoc to convert your Markdown manuscript file into a Word file. The formatting should be good enough, but you might have to tweak your tables a little (see Figure 2 for an example). While this seems like an unnecessary and somewhat

290 tedious step, you should only have to do it once per manuscript. And make sure you do it at the very
291 end, when you and your colleagues have make all the required changes.

292 Someday, we may actually be able to provide Markdown or text files as the final product. But we
293 should not let a journal or publisher, and their idiosyncratic choice of preferred final file, influence how
294 we spend the vast majority of our time working on our manuscript. We will spend countless hours
295 writing and revising our paper; I would much prefer work in a simple, clean format like Markdown for
296 those hours, and then spend a somewhat painful 5-10 min tweaking a Word document if my manuscript
297 has passed a first round of reviews and I have been asked to submit a revised version.

298 **Marked-up version of your manuscript**

299 When submitting a revised version of your manuscript, journals often ask for a marked-up version,
300 to show the various additions and deletions that have been made. How do we do this in the current
301 workflow?

302 There is a wonderful LaTeX package called `latexdiff` that does a great job when you have two
303 versions of the same `.tex` file. A call to this program would look like this:

```
304 latexdiff manuscript.tex revised_manuscript.tex > diff.tex
```

305 Thus, we could have Pandoc output two `.tex` files, one from our original submission and one from our
306 revised version, and get the marked-up version that can be processed using `pdflatex` (or `xelatex`)
307 to get a nice looking PDF. An example of what such a PDF document looks like is shown in Figure 3.

308 Another option that is in theory simpler is to use ~~strikeout text for the things that you want to delete~~ and
309 **bold text for any additions**. This is can be achieved using basic Pandoc Markdown: `~~strikeout`
310 `text for the things that you want to delete~~` and `**bold text for any additions.**`

311 While this approach may seem simpler because it does not require running files through `latex-diff`
312 and recompiling a PDF document, it is actually much more work. Consider a document that has been
313 through multiple rounds of revisions by you and your co-authors, how will you know what has been
314 added and what has been deleted? The only way for this to work is for you and your co-authors to
315 agree on the convention to manually ~~strikeout text~~ using `~~text~~` and manually bold new next with
316 `**text**`. It could work, but because it is not common practice, it is quite likely that someone will
317 forget to do it. Best to learn to work with `latex-diff` if you ask me.

318 **Conclusion**

319 The approach presented here is somewhat simplistic. However, it provides a nice introduction to
320 Pandoc and Markdown for academic writing that does not use much or any mathematical notation or
321 formulas, or embedded code. A slightly different flavour of Markdown, called R-Markdown is popular
322 amongst users of the R programming language. When combined with `knitr`, it can be used to write
323 papers in various journal-specific styles. It can even work with Python code. However, my approach
324 is generally to start simple and use more sophisticated tools when I need them. The current approach
325 will do me just fine for the majority of my papers.

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330 between the sofa cushions.

331 **Author Contributions**

332 Authors agree to attest that they have contributed sufficiently to be listed as an author.

Table 1: Fundamental inline formatting in Pandoc-flavoured Markdown

Inline formatting	Pandoc Markdown command	Result
Bold	<code>**bold**</code>	bold
Italic	<i><code>*italic*</code></i>	<i>italic</i>
Superscript	^{<code>x^2^</code>}	x^2
Subscript	_{<code>x~2~</code>}	x_2
Emdash	<code>--</code>	—

Table 2: Example of special characters that can be typed directly into a text editor and are properly rendered by Pandoc, without using the LaTeX math-mode or other packages.

Character name	output
Degree symbol	°
Greek letters	β α
plus-minus	±
Sumamtion	Σ
Trademark	™
Copyright	©
Money	¢ £ €

Table 3: Atom plugins that make writing (Markdown) documents a joy.

Atom plugins	Functionality
<code>autocomplete-bibtex</code>	Amazing plugin that simplifies entering reference key
<code>character-table</code>	For insert special characters
<code>language-markdown</code>	To allow language highlighting for Markdown
<code>pdf-view</code>	Provides in-editor PDF reviewer
<code>platformio-ide-termial</code>	An embedded terminal window to run your Pandoc commands
<code>tool-bar-markdown-writer</code>	Helpful when first learning Markdown and its commands
<code>markdown-preview</code>	Provides real-time HTML rendered view of Markdown document
<code>wordcount</code>	Wordcount of current document
<code>markdown-fold</code>	Can fold sections, and thus focus on parts of document

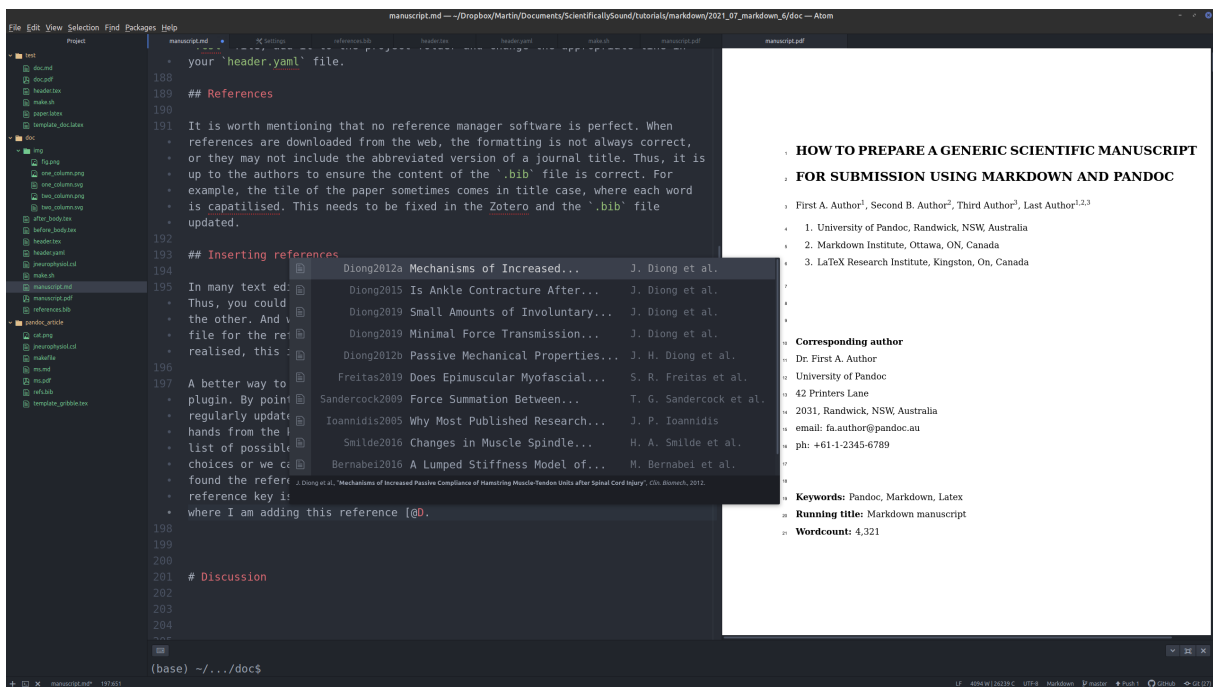


Figure 1: Autocomplete Bibtex in action. After typing the @ symbol and typing the first letter of the reference we wanted to enter, a list of possible references popped up. We can continue typing to narrow down the choice of available references, or we can use the up and down key to scroll through the references. Note that at the bottom of the pop-up screen there is a formatted version of the currently selected reference.

HOW TO PREPARE A GENERIC SCIENTIFIC MANUSCRIPT FOR SUBMISSION USING MARKDOWN AND PANDOC

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Abstract

Purpose. If journal requires abstract sections, these can be included and made bold by including double asterisks `**<section_name>**` before and after each header. If these are not needed, simply do not include them, simple. **Methods.** Because of our selected font, we can easily include special characters directly into our markdown file and these will be rendered properly. This provides some motivation to find a text editor that has a good *character map* plugin. Personally, I have grown rather fond of the Atom editor, which has a *character-map* plugin that does the trick. by clicking on a hotkey, `Alt-l`, I can type the name of the symbol I am looking and it is inserted into my document. **Results.** So lets say I just pressed `Alt-l` and typed `plusminus`. The item at the top of the list would be \pm , as expected. I hit Enter and it is inserted into my document. This makes it easy to say that, on average, my level of frustration drafting a manuscript has decreased by $77\% \pm 4\%$ since learning about Markdown and Pandoc. Also, scientific papers always sound fancier when you use Greek letters. So I will search for the letter beta, which gives me the special character β . Also, because Pandoc converts Markdown to PDF using LaTeX, it is amazing support for mathematical equations and the like. Most basic tutorials on LaTeX should cover the basics of math-mode (i.e. `$stuff$`). **Conclusion.** This dummy

Figure 2: Word document. What the first page of the current document looks like when it is converted to .docx using Pandoc. Much of the formatting is correct, including the references list.

~~Draft~~ Revision Title

Pratik Patel and Another Author

February 9, 2013

This is an example of a ~~draft~~ revision article. These are some types of changes to ~~expect~~ be expected. Here is how it deals with equations:

$$y = \int (x^2 + ~~3~~ 32) dx \quad (1)$$

When you do not include your collaborator's name in the document, they might get upset with you. But inclusion of their name in the final version will settle all scores.

Figure 3: latex-diff. An example of generating a PDF document of the differences between two documents.

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