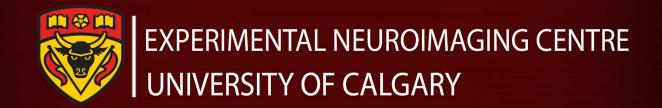
# Clinical Guide to fNIRS Research

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### Chapter 1

## Index

#### 1.1 Things to add

Signe recommended students run a live tutorial in swirl

#### 1.2 Documentation for Author

#### 1.3 Andrew's Notes / Ramblings

To render the book used the following code, you must do this before knitting the GitBook (webpage)

```
bookdown::render_book("index.Rmd", "bookdown::gitbook")
bookdown::render_book("index.Rmd", "bookdown::pdf_book", encoding="UTF-8")
bookdown::render_book("index.Rmd", "bookdown::epub_book")
```

The \_output.yml contains the header arguments. I would but them here so its cleaner and easier to read the code.

#### 1.4 To Do

- Is there a way I can have matlab code syntax highlighted properly? Maybe here
- Get Camera to take nice pictures

- Get example dataset that I can run through
- Can I export this to github.io? The GitHub Repository for this guidebook can be found here
- Add highlight arg to \_output.yml
- Upload the MATLAB packages required to GitHub directory
- ☐ Implement Open Review which will allow people to make comments. An example can be seen here
- ☐ Push my commits to GitHub
- $\square$  Open a pull request
- □ Cleaned the main directory to make it easier to interpret for beginners

#### For Chapter ??

- $\square$  steal logo from here. It would be great to have a logo here that was cowboy themed
- ☐ These animations would be great at explaining some key concepts

#### 1.5 Title word cloud

Titles: inquiry-based R for researchers in a hurry Reproducible science

#### 1.6 Copy from Chapter 1 Example

You can label chapter and section titles using {#label} after them, e.g., we can reference Chapter \@ref(intro). If you do not manually label them, there will be automatic labels anyway, e.g., Chapter \@ref(methods).

Figures and tables with captions will be placed in figure and table environments, respectively.

```
par(mar = c(4, 4, .1, .1))
plot(pressure, type = 'b', pch = 19)
```

Reference a figure by its code chunk label with the fig: prefix, e.g., see Figure \@ref(fig:nice-fig). Similarly, you can reference tables generated from knitr::kable(), e.g., see Table \@ref(tab:nice-tab).

```
knitr::kable(
  head(iris, 20), caption = 'Here is a nice table!',
  booktabs = TRUE
)
```

You can write citations, too. For example, we are using the **bookdown** package in this sample book, which was built on top of R Markdown and **knitr**.

#### 1.7 MATLAB Highlighting

```
% This is a comment in MATLAB
function y = average(x)
if ~isvector(x)
    error('Input must be a vector')
end
y = sum(x)/length(x);
end
```

So could this

#### 1.8 Misc code/data

#### 1.9 Other Resources

https://medium.com/@huixiangvoice/the-hidden-story-behind-the-suicide-phd-candidate-huixiang-chen-236cd39f79d3?fbclid=IwAR3zJ0zHAhNaHhRdXkiHfHOJV9RjZWDW6KReN6FB9lkx-filed-f

Book called Just Enough R

To test the normality of your data you can use a few different methods

- http://www.sthda.com/english/wiki/normality-test-in-r
- $\bullet \ \, \text{https://rstudio-pubs-static.s3.amazonaws.com/2002\_1f803b2bc84c46008d3599a07867a95a.} \ \, \text{html} \\$

- 1. Plot your data
- 2. Check skewness and kurtosis
- 3. Shapiro test.

There should be a section on general access to your df. How to manipulate it effectively (perhaps in the data wrangling section) This would include things like using df\$colname to access a column