

using .qmd

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2021-05-22

```
template has \small font embedded
!pandoc % -f markdown --template ~/dotfiles/proposed_template.latex -V geometry:margin=0.4in --toc-depth=4 -
V toc-title="Reading" -o out.pdf ; zathura out.pdf
```

Table of contents

BookClub	1
R - always learn something new:	1
R - Documentation (can beat searching !)	2
R - graphics (base:: is main package)	2
Basic Statistics	2
Other book stats/R books:	3
More advanced regression/modeling books	3
Good Technical Reading	5
Videos	6
APIs and R	6
NEOVIM/LUA	7
Android	7

As of April 22, 2023

Use `\href{url}{text}`

BookClub

- Janssens, DS at Command Line: <https://www.datascienceatthecommandline.com/2e/>
- Hadley, <https://mastering-shiny.org/>
- R, javascript + shiny <https://book.javascript-for-r.com/>
- HTTP Testing (book) <https://books.ropensci.org/http-testing/>

R - always learn something new:

- Burns, R Inferno (not intro book)
- Peng, <https://bookdown.org/rdpeng/rprogdatascience/> * Peng, <https://bookdown.org/rdpeng/RProgDA/>
- Hadley, <https://r4ds.had.co.nz/index.html>
- [Jennybc \(book\) wtf git](#)
- Gillespie, Lovelace (2016) <https://bookdown.org/csgillespie/efficientR/>
- Matloff: Art of R Programming (2011)
- de Jong, Intro to Data Cleaning https://cran.r-project.org/doc/contrib/de_Jonge+van_der_Loo-Introduction_to_data_cleaning_with_R.pdf
- Grolemund, 2014 <https://rstudio-education.github.io/hopr/>

R - Documentation (can beat searching !)

- Just Read the docs! <https://rdr.io/r/>
- official R CRAN: <https://cran.r-project.org/manuals.html>
 - R intro: <https://cran.r-project.org/doc/manuals/r-release/R-intro.html>
 - R Lang: <https://cran.r-project.org/doc/manuals/r-release/R-lang.html>
- design.tidyverse.org
- Just Read the docs! <https://rdr.io/r/>

R - graphics (base:: is main package)

- <https://rdr.io/r/graphics/par.html>
- R intro - Ch 12: <https://cran.r-project.org/doc/manuals/r-release/R-intro.html#Graphics>
- R internals - Ch 6 graphics (lower level)
- base Idiot's guide https://rstudio-pubs-static.s3.amazonaws.com/7953_4e3efd5b9415444ca065b1167862c349.html

Basic Statistics

More Intuitive/Explanatory:

- [Rossman, know all the basics? confident?] (<https://askgoodquestions.blog/>)
- Przemyslaw Biecek and Tomasz Burzykowski | different ideas | Ch1, 2 Explanatory Model Analysis | <https://ema.drwhy.ai/>
- ML Berkeley: <https://ml.berkeley.edu/blog/posts/crash-course/part-1/>
- Goodfellow et al: <https://www.deeplearningbook.org/> ideas
- Guo: Creative site and book: <https://seeing-theory.brown.edu/#firstPage>
- navarro (learn statistics with r) review `lm()` and geometric r^2 , Ch15, 16
- navarro 2019 (learn statistics with r) study output of `lm()` * Huntington <https://www.theeffectbook.net/index.html> (intuition?)

Solid, basic stats intros

- PSU Course begin with 414 | | no R * <https://online.stat.psu.edu/stat414/> * <https://online.stat.psu.edu/stat462/> * <https://online.stat.psu.edu/stat415/>
 - AMS Basic, good intro CLT (but not t)
 - Dekking, et al Modern Introduction to Probability & Statistics (2005), no R. https://cis.temple.edu/~latecki/Courses/CIS2033-Spring13/Modern_intro_probability_statistics_Dekking05.pdf
 - Faraday, PRAR: Practical Regression, Anova, linear algebra (mature approach)
 - Frey, Bruce “Statistical Hacks”
 - [Dalpiaz, David, Univ of IL] (<https://davidalpiax.github.io/appliedstats/>)
 - Lindelov: Concise R examples of common stat tests. * Lavine, Statistical Thought: <https://people.math.umass.edu/~lavine/Book/book.pdf>
 - Matloff (Prob book) * <http://heather.cs.ucdavis.edu/~matloff/132/PLN/probstatbook/ProbStatBook.pdf> * (via pdflatex) <https://github.com/matloff/probstatbook> Good, maybe too good and skips a few basics?
 - Siegrist CLT, stats, linear alg | aka randomservices.org | ** best book for introducing Math
- Nahim, Dueling Idiots, harder but real world stats/prob problems (pins falling on surfaces)

R and Special Topics

- Data Science at Command Line (book) <https://datascienceatthecommandline.com/2e/chapter-2-getting-started.html>
- videos: <https://www.youtube.com/c/R4DSOnlineLearningCommunity>

Blogs

- <https://towardsdatascience.com>
- R-Blogger - <https://rweekly.org/> {rweekly.org} - <https://www.rstudio.com/blog/software-development-resources-for-data-scientists/> - [milospopovic](#)

R, the Language: Functional, Standard and Non- Evaluation, Environments, Call Stacks:

- Chambers (2008) “Statistics & Computing” (much coverage of R internals) https://files.slack.com/files-pri/T6UC1DKJQ-F016BP8QPMG/download/john-chambers-software-for-data-analysis-programming-with-r.pdf?origin_team=T6UC1DKJQ
- Gaslam, Brodie - blog - several good posts * NSE: <https://www.brodieg.com/2020/05/05/on-nse/> * HP Calculator & Reverse Polish! <https://www.brodieg.com/2019/01/11/reverse-polish-notation-parsing-in-r/> * Side Effects, Macros: <https://www.brodieg.com/2019/10/30/visualizing-algorithms/>
- Gupta, Suraj - How R Finds objects: <https://blog.obautifulcode.com/R/How-R-Searches-And-Finds-Stuff/>
- Rnews - Lumley, Macros in R: https://www.r-project.org/doc/Rnews/Rnews_2001-3.pdf
- Rnews - 2001-2008 has lot of good articles
- rlist use functional ideas with lists: <https://renkun-ken.github.io/rlist/>
- tutorial for rlist: <https://renkun-ken.github.io/rlist-tutorial/>
- Gatto: https://github.com/lgatto/TeachingMaterial/blob/master/_R-functional-programming/functional-programming.pdf

Haskell

- fairly gentle Haskell intro: <https://www.cantab.net/users/antoni.diller/haskell/units/unit02.html>
- Haskell book: <http://book.realworldhaskell.org/read/>

Other book stats/R books:

- Hannay (=rbassett) read, (avoid pkgs ch 11, 12) | https://faculty.nps.edu/rbassett/_book/
- Ismay modern dive (2020)
- Kaplan (2017) ch 6.5 <https://dtkaplan.github.io/SM2-bookdown/> (wordy, but exposes nuances)
- Lane se(b_hat)
- Matloff(2020) book
- McElreath (videos)
- PENG | art of ... (2017) ch 6.5 (<https://bookdown.org/rdpeng/artofdatascience/>) | r4ds (2019) ch 9.5
- mosaic ch 5.6, ch 24

More advanced regression/modeling books

- Shalizi: excellent:
- (2019) <http://www.stat.cmu.edu/~cshalizi/TALR/> -deeper/more explanatory. By Ch 11, use of gradient f, matrix derviations
- Shalizi <http://www.stat.cmu.edu/~cshalizi/ADAfaEPoV/ADAfaEPoV.pdf>
- <http://www.stat.cmu.edu/~cshalizi/mreg/15/>
- Davidson (Econometric) - Ch 1, 2
- **ISLRv2:** (book) https://web.stanford.edu/~hastie/ISLRv2_website.pdf - videos: <https://www.youtube.com/c/R4DSOnline-LearningCommunity>
- MATLOFF (1st book) | ch3 - lot of useful prproperties of x,y | ch 7 - affine transformations
- Efron, Hastie “Computer Age Statistical Inference” (advanced, but chapter intros put techniques into perspective), no R.
- Kuhn (2019): <https://bookdown.org/max/FES/>
- RAFAEL dsbook - ch 17.4, ch 18.3.4
- **Roback/Legler Beyond Multiple Linear Regression: (2021)** <https://bookdown.org/roback/bookdown-BeyondMLR/> (Replaces BYSH) introduces likelihood; ch6 - logistic worked problem
- Siegrist (aka random services.org) * random | (3)expected value 1.11 and |(5) random samples 1-8 (t-dist)
- Taubes, linear alg, statistics, http://people.math.harvard.edu/~knill/teaching/math19b_2011/handouts/chapters1-19.pdf Biology? math? probability? Think this is really an ideas book; not as easy as may appear.

Algorithms & ML

- Berkeley, excellent glossary: <https://www.stat.berkeley.edu/~stark/SticiGui/Text/gloss.htm>
- Berkeley CRASH
- Chollet, Deep Learning for R (not online, no pdf)
- Compeau:
 - great ideas book! <http://compeau.cbd.cmu.edu/>
 - <http://compeau.cbd.cmu.edu/programming-for-lovers/> cmu - ch 8, 9 esp collinear.
- Boehmke Hands on ML | <https://bradleyboehmke.github.io/HOML/> Ch 4,5
- Deisenroth, Faiesel et al | Math4ML *book | linear alg book, regression, 2nd level
- Gagolewski Lightweight ML with R <https://lmlcr.gagolewski.com/>
- Higgens “Practical R Info?”
- Huntington “The Effect Book”
- mcelreath: https://github.com/rmcelreath/stat_rethinking_2022 (videos)
- Molnar, “Interpretable ML”
- SciLearn
- Thomas, Math for ML ... good lin alg, but quickly gets advanced. <https://gwthomas.github.io/docs/math4ml.pdf>
- mcelreath: https://github.com/rmcelreath/stat_rethinking_2022 (videos)
- <https://www.tmr.org/>
- UCLA: Mixed Models - intro: <https://stats.oarc.ucla.edu/other/mult-pkg/introduction-to-linear-mixed-models/>
- Varma: Deep Learning <https://srdas.github.io/DLBook/>

Bayes

- [Arbital](#), wiki-like
- Barber, David: Bayesian Reasoning & ML (examples): [Barber](#)
- Clyde, Mine et al Intro To Bayesian Thinking (R,intuitive, online only)
- Downey, Allen [2012 pdf](#), [clear intuitive](#), but [python](#)
- Davidson-Pilon Bayesian for Hackers python, but ideas seem well presented.
- Dekking [Dekking Modern Intro](#)
- Gimenez: Easy Stats (examples)
- Kurz: Statistical Rethinking reCoded (Bayesian) <https://bookdown.org/content/4857/#how-to-use-and-understand-this-project> (R, meant as supplement to McElreath)
- Johnson, Ott et al: [BayesRules !](#)
- Lavine (tutorial) <https://people.math.umass.edu/~lavine/whatisbayes.pdf>
-
- McElreath: book, videos Statistical Rethinking [info](#)
- paulvanderlake (many R resources) 2012 ThinkBayes [paulvanderlake](#)
- Taubes, Lectures 1-19 [Lectures 1-19](#)

2nd Bayes books | Advanced or Interesting Ideas

- Aaronson, Scott: <https://www.scottaaronson.com/qclec.pdf> Information Theory: CS, Quantum, Bayesian, linear algebra, Probability
- Cunningham, Scott: Mixtape: Causal Inference [mixtape](#)
- Huntington-Klein The Effect Book wordy [Effect Book](#)
- Gelman: DBA3 [Gelman DBA 3](#)
- Lebanon, Guy [Analysis of Data](#); more advanced math, some measure

Shiny

- R, javascript + shiny <https://book.javascript-for-r.com/>
- Hadley, <https://mastering-shiny.org/>
- <https://engineering-shiny.org/>
- HTTP Testing (book) <https://books.ropensci.org/http-testing/>

Linear Algebra (as mathematics)

- Beezer Linear Algebra (easier?)
- Herve Adbi | lin alg| no R, no stat, starts simple but gets to decomposition.
- Strang, Linear Algebra (classic)
- Artin, Michael “Algebra” - readable ?
- Friendly - R Pkg linear algebra
- Kazan | normal equations

Intro to Linear Alg & Models,

- Kuiper, Shonda: simple, clear: video: <https://www.youtube.com/watch?v=jQkK0XMrAdM>
- Race, Shaina gentle intro to lin alg:, <https://shainarace.github.io/LinearAlgebra/index.html>
- Thomas, Garrett, Math for ML, Berkeley <https://gwthomas.github.io/docs/math4ml.pdf>
- Bendixcarstensen.com, with R & matrix models (practical; try not use api pkg) <http://www.bendixcarstensen.com/APC/linalg-notes-BxC.pdf>
- Rafael genomics - Chapter 4 matrix

Latex (.tex, latex, not knitr, markdown, pandoc)

- <https://learnbyexample.github.io/customizing-pandoc/>
- [Not So Short Introduction](#)
- Latex: Latex in 24 hours (iPad)
- <https://mirrors.rit.edu/CTAN/info/beginlatex/html/intro.html#intro>
- wikibooks: https://en.wikibooks.org/wiki/LaTeX/Document_Structure
- <http://ctan.imsc.res.in/info/first-latex-doc/first-latex-doc.pdf>
- <https://texfaq.org/FAQ-man-latex>
- LuaTex Manual: <http://www.pragma-ade.com/general/manuals/luatex.pdf>
- LuaTex Background Overleaf: [https://www.overleaf.com/learn/latex/Articles/An_Introduction_to_LuaTeX_\(Part_1\)%3A_What_is_ferent%3F](https://www.overleaf.com/learn/latex/Articles/An_Introduction_to_LuaTeX_(Part_1)%3A_What_is_ferent%3F)
- Fontspec pkg (for LuaTex) <https://mirrors.rit.edu/CTAN/macros/unicodetex/latex/fontspec/fontspec.pdf> * Video: Michelle ... (very clear!)

Math Mode

- * AMS math documentation
 \href{https://www.latex-project.org/help/documentation/amslatex.pdf}{2017 version on ipad}
- * <https://www1.cmc.edu/pages/faculty/aaksoy/latex/latexthree.html#>
- * <http://web.mit.edu/rsi/www/pdfs/math.pdf>
- * <https://www.atqed.com/latex-column-vector>

Good Technical Reading

- Linux: Archiwiki, Debian, FreeBSD
- Gross, Ash et al “Elliptical Tales” - very readable, but must think! (515.983 | ASH | 2012) * Linux- insides: <https://0xax.gitbooks.io/linux-insides/content/>
- Seefeld, et al Biology & R | https://cran.r-project.org/doc/contrib/Seefeld_StatsRBio.pdf
- Robert Sedgewick and Kevin Wayne (essential info ... serious programmers) <https://algs4.cs.princeton.edu/home/>

ZSH

- Janssens, DS at Command Line: <https://www.datascienceatthecommandline.com/2e/>
Great way to improve zsh, CLI skills. * Rothgar Mastering ZSH: <https://github.com/rothgar/mastering-zsh>

REGEX

Focus: **grep -P**, **regex usage**:

- <https://linuxize.com/post/regular-expressions-in-grep/#grep-regular-expression> (overview, not bad place to start)
- another overview: <https://bsd.org/regextro.html>
- !wikipedia - several excellent articles and background.
- GNU grep documentation: <https://www.gnu.org/savannah-checkouts/gnu/grep/manual/grep.html#Top>
- **wikipedia articles!**
Because touch upon many issues: quoting, expansions, quasi-quotation, recursion, definitions which I have stumbled across but never really understood at appropriate abstraction. Now it may clarify why do what we do and why the nomenclature is the way it is.
- !so [regex](https://stackoverflow.com/tags/regex/info) FAQ: <https://stackoverflow.com/tags/regex/info> (specific question (else can get lost in all the permutations.)

Too comprehensive? (docs that cover flavors, usage in languages are too confusing to me)

- (Regex | Jan Goyvaerts) <https://www.regular-expressions.info/tutorial.html> (regex buddy)
- <https://www.regular-expressions.mobi>
- <https://learnbyexample.github.io> - some very intuitive arguments
- (iPad) Mastering Regular Expressions

Finite Automata?

- <https://sodocumentation.net/regex>
- <https://swtch.com/~rsc/regexp/regexp1.html>

Videos

- [maththebeautiful](#) - Paul?
- [Statquest](#) - Josh Starmer
- [Bright Side of Math](#)
- [3Blue1Brown](#)
- Zedstatistics
- [Chris Mack](#) - practical R, models
- [Statistics Globe](#) * Edward Malthouse - is careful with assumptions. * Prof Christoph Scherber -03 * Lorenzo * Sadum * Tom Raby * Jazon Jiao (Alg + Regression)

DT Joins (merge)

- <https://rdatatable.gitlab.io/data.table/index.html>
- <https://stackoverflow.com/questions/1299871/how-to-join-merge-data-frames-inner-outer-left-right?noredirect=1&lq=1> - <https://jozef.io/r006-merge/> -

APIs and R

Longer Reading/Documentation

- [Gargle docs include discussion of a few Google Cloud features](#)
- [Mozilla MDN](#)
- [Request body](#)
- <https://oauth.com> (Aaron Parecki)
- web technologies, including RESTFUL, <https://www.se.rit.edu/~swen-344/expectations/>
- [RFC Specs](#)
- JSON - <https://json-schema.org/>

[Something Linky](#)

Videos

- [Anson, Getting Google API/Oauth2 setup.](#)
- [Griffith](#) Curl to make requests. gmaps Google Maps API https://www.youtube.com/watch?v=Of_M4kcE9yM&list=PLbcglKxZP5PN07Vw-0ukcDJCxFGY2Crgc
- [freeCodeCamp](#) Postman Intro.
- [Oauth 2.0 - Explain like I am 5] (<https://www.youtube.com/watch?v=hHRFjbGTEOk>)
- <https://www.youtube.com/watch?v=rh1eIjSbvkx> Basic Authentication: urlencode, user:pass, how browser responds, TLS
- Curl's Creator <https://youtu.be/I6id1Y0YuNk?list=PLbcglKxZP5PN07Vw-0ukcDJCxFGY2Crgc>
- Postman and GitHub: <https://youtu.be/AfuL7AFpFmQ?list=PLbcglKxZP5PN07Vw-0ukcDJCxFGY2Crgc>
- Plumber::R, api <https://www.youtube.com/watch?v=J0Th2QRZ7Rk> * R4DS all videos: <https://www.youtube.com/c/R4DSOnlineLearningCommunity>

CRAN Task Views: Web Technology & Services: <https://cran.r-project.org/web/views/WebTechnologies.html> * (R & Dropbox)
<https://github.com/karthik/rdrop2> (2020) * (R & Predictit) <https://github.com/kiernann/predictr>

RESTFUL APIS (see 0300_tech_notes.md)

NEOVIM/LUA

Config

- <https://neovim.io/doc/user/quickref.html#option-list>
- Code Ex: | Joel | goal: understand ! | <https://github.com/whatsthatismell/dots/tree/master/public%20dots/vim-nvim>
- <https://cj.rs/blog/my-setup/nvim-0-5/> | go to playlists | view all playlists | choose by length, date etc.
- Statusline: <https://elianaiva.my.id/post/neovim-lua-statusline#active-statusline>
- <https://www.jakewiesler.com/blog/getting-started-with-vim> | Jake | good but limited.
- blog + <https://vonheikemen.github.io/devlog/tools/configuring-neovim-using-lua/>
- blog + <https://blog.devgenius.io/create-custom-keymaps-in-neovim-with-lua-d1167de0f2c2>
- Ex: <https://gitlab.com/mcepl/vimdir/-/tree/master/plugin>
- Ex: <https://github.com/samuelludwig/nixrc/tree/master/modules/user/nvim/lua/dot>
- 300 line challenge: <https://neovim.discourse.group/t/the-300-line-init-lua-challenge/227>
- <https://benfrain.com/refactor-your-neovim-init-lua-single-file-to-modules-with-packer/>
- <https://github.com/nanotee/nvim-lua-guide>
- kickstart: <https://github.com/nvim-lua/kickstart.nvim/blob/master/init.lua>

Lua

1. <https://www.lua.org/manual/5.4/>
2. <http://www.lua.org/pil/contents.html> (1st ed)
3. <https://learnxinyminutes.com/docs/lua/> (learn X in Y)
4. <http://lua-users.org/wiki/LuaDirectory> (lua tutorial, wiki)
5. Lua by example: <https://luabyexample.org/>

Plugins

Android

- <https://www.androidauthority.com/lineageos-install-guide-893303/> {decent primer:android RoM”
- [adb documentation](#)