Comprehensive Resources for Learning R Programming

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Books

Beginner-Friendly

- *R for Data Science* by Hadley Wickham and Garrett Grolemund: A foundational book focusing on data manipulation, visualization, and analysis using the tidyverse.

- *Hands-On Programming with R* by Garrett Grolemund: A practical introduction to R for programming and problem-solving.

- *R Programming for Beginners* by Nathan Metzler: Covers R basics with simple examples.

Intermediate

- *Advanced R* by Hadley Wickham: Explores advanced R programming topics like functions, environments, and object-oriented programming.

- *Efficient R Programming* by Colin Gillespie and Robin Lovelace: Focuses on optimizing R code for speed and performance.

Specialized Topics

- *Statistical Inference via Data Science* by Chester Ismay and Albert Y. Kim: A guide for statistical learning with R.

- *Geocomputation with R* by Robin Lovelace, Jakub Nowosad, and Jannes Muenchow: Spatial data analysis with R.

Reference Books

- *The Art of R Programming* by Norman Matloff: A comprehensive overview of R programming, data structures, and algorithms.

Web Tutorials and Online Guides

- RStudio Education: Official tutorials and resources from the RStudio team, covering data science workflows.

- Quick-R: A concise guide to R basics and statistical applications.

- Tidyverse Website: Documentation and tutorials for the tidyverse suite of R packages.

- Datacamp: Introduction to R: Interactive lessons for learning R basics.

- R Graph Gallery: A collection of visualization examples with R code.

- RDocumentation: A searchable library of R packages and their documentation.

Courses

Free

- Swirl: An R package that teaches R programming interactively within RStudio.

- The Basics of R by HarvardX on edX: Covers R fundamentals as part of the Data Science certificate.

- Coursera: R Programming (Johns Hopkins University): Part of the Data Science Specialization.

Paid

- DataCamp: R Programmer Career Track: A series of R courses for all levels, from basics to advanced.

- LinkedIn Learning: Learning R: Offers tutorials for learning R basics.

- Udemy: R Programming A-Z: Covers everything from basic R programming to advanced statistical modeling.

Videos and YouTube Channels

- R Programming for Beginners (freeCodeCamp): A comprehensive R tutorial series.

- StatQuest with Josh Starmer: Explains R concepts and statistical methods in an easy-to-understand manner.

- Edureka R Programming Tutorials: Covers R programming basics, visualization, and analytics.

Interactive Platforms

- RStudio Cloud: A browser-based RStudio environment for hands-on learning.

- Kaggle: Hands-on tutorials and datasets for R.

- Codecademy: Learn R: Interactive lessons for R programming basics.

Community and Forums

- RStudio Community: An active forum for R learners and experts.

- Stack Overflow R Tag: A Q&A platform for solving R-related programming issues.

- Reddit: r/Rlanguage: Discussions, questions, and resources about R programming.

Blogs

- R-bloggers: A collection of R programming tutorials and resources.

- DataScience+: Covers data science techniques and visualization in R.

- Revolutions: News and insights on R programming.

Specialized Tools and Libraries

Visualization

- ggplot2: For creating elegant and customizable plots.

- shiny: For building interactive web apps with R.

Data Manipulation

- dplyr: For data manipulation.

- tidyr: For reshaping and tidying data.

Statistical Modeling

- caret: For machine learning workflows.

- lme4: For linear and generalized linear mixed models.