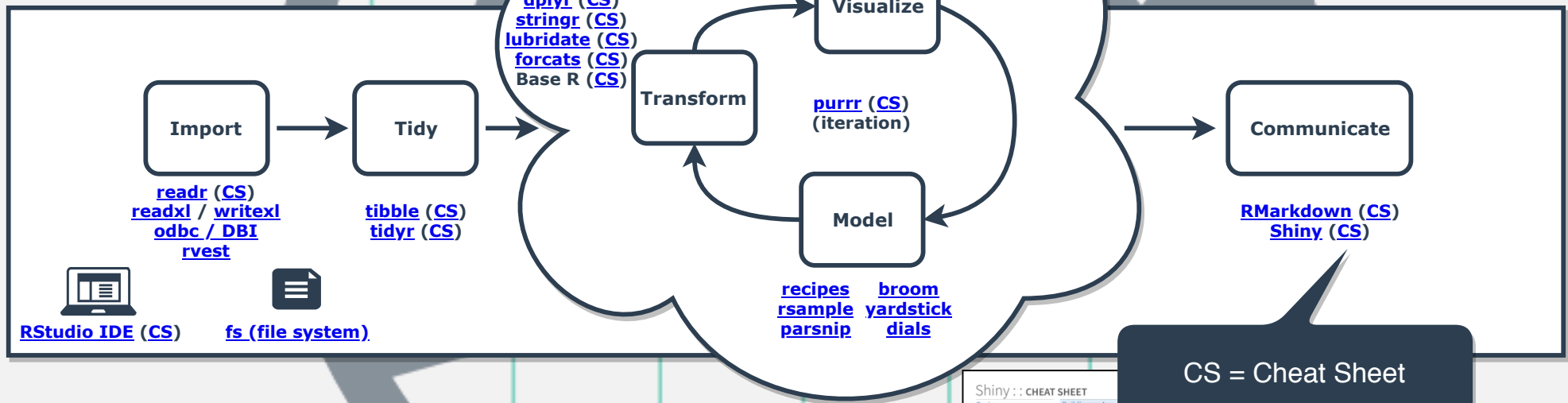
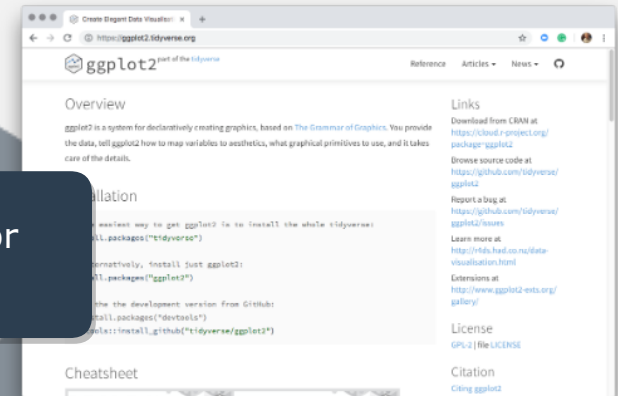


# Data Science with R Workflow

The Data Science With R Workflow is available in the book: [R For Data Science](#). If you want to learn R and this workflow *for business analysis*, take the [R For Business Analysis \(DS4B 101-R\) course](#) through Business Science University.

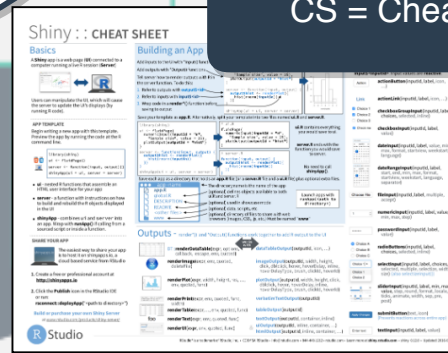


Click the links for Documentation



## Important Resources

- R For Data Science Book: <http://r4ds.had.co.nz/>
- Rmarkdown Book: <https://bookdown.org/yihui/rmarkdown/>
- Data Visualization Book: <https://rkabacoff.github.io/datavis/>
- More Cheatsheets: <https://www.rstudio.com/resources/cheatsheets/>
- tidyverse packages: <https://www.tidyverse.org/>
- Connecting to databases: <https://db.rstudio.com/>
- RMarkdown website: <https://rmarkdown.rstudio.com/>
- Shiny web applications website: <http://shiny.rstudio.com/>
- Jenny Bryan's purrr tutorial: <https://jennybryan.org/>



### Time Series Analysis

- Time-aware tibbles: [tibbletime](#) & [tsibble](#)
- Convert between classes: [timetk](#) & [tsbox](#)
- Time Series Index Summary: [timetk](#)
- Generating Future Series: [timetk](#)

### Forecasting

- ARIMA, ETS, etc: [forecast](#) & [fable](#)
- Tidy, glance, augment for forecast models: [sweep](#)
- Converting forecast prediction to tibble: [sweep](#)

### Anomaly Detection

- Identify anomalies: [anomalize](#)

### Financial Analysis

- Getting financial data: [tidyquant](#) & [quantmod](#)
- Quantitative Analysis: [tidyquant](#) & [xts/TTR](#)
- Portfolio Analysis: [tidyquant](#) & [PerformanceAnalytics](#)

### Financial & Time Viz

- Static:
  - [tidyquant](#) - Financial ggplot2 geoms
- Interactive:
  - [highcharter](#) - highchart.js in R
  - [dygraphs](#) - xts plotting
  - [plotly](#) (CS) - plotly.js (financial) in R

### Text Analysis & NLP

- [Text Mining with R \(Book\)](#): [tidytext](#)
- NLP:
  - [H2O word2vec](#): Word embeddings
  - [text2vec](#): fast vectorization, topic modeling
  - [udpipe](#): [UDPipe](#) C++ lib in R

### Network Analysis

- Network Data Transformations (Tidy): [tidygraph](#)
- Network Data Transformations: [igraph](#)

### Network Viz

- Static:
  - [ggraph](#) - Graph plotting utilities for ggplot2
- Interactive (JavaScript):
  - [networkD3](#) - D3 Networks in R
  - [plotly](#) (CS) - plotly.js (network graphs) in R

### Geospatial Analysis

- Geocoding (getting lat/long, bboxes, & sf's):
  - [ggmap](#) - Google API (requires key)
  - [osmdata](#) - OpenStreet Overpass API
  - [tmaptools](#) - OpenStreet Nominatum API
- Simple Features (sf objects): [sf](#) (CS) (tidy)
- Spatial Objects (sp objects): [sp](#) (non-tidy)

### Geospatial Viz

- Static:
  - [ggmap](#) - Google API (requires key)
  - [osmplotr](#) - Impressive Maps via OSM
  - [tmap](#) - Thematic Maps
  - [cartography](#) (CS) - Thematic Maps
- Interactive (JavaScript):
  - [leaflet](#) (CS) - leaflet.js in R
  - [plotly](#) (CS) - plotly.js (maps) in R

### Machine Learning

- Multi-Threaded/Scalable/Production ML:
  - [H2O](#) (CS)
  - Extreme Gradient Boosting: [xgboost](#)
  - R + Spark: [sparklyr](#) (CS)
  - Sparkling Water (Spark + H2O): [rsparkling](#)
- ML (Tidy): [parsnip](#)
- ML: [caret](#) (CS)

### Deep Learning

- [R Interface to TensorFlow Homepage](#):
  - [Keras](#) (CS)
  - [TF Estimators](#)
  - [TensorFlow \(Core\)](#)

### Speed & Scale

- Fastest Single-Node Speed: [data.table](#) (CS)
- Distributed Cluster (Spark): [sparklyr](#) (CS)
- Parallel Processing: [furrr](#)

### Interoperability

- Python: [reticulate](#)
- C++: [Rcpp](#)
- Java: [rJava](#)

### Miscellaneous Tools

- Interactive Plotting: [htmlwidgets](#) for R
- Building R Packages: [R packages Book](#)
  - Pkg Development Tools: [devtools](#) (CS)
  - R Templates: [usethis](#)
  - Build Web Doc's: [pkgdown](#)
- Advanced Concepts ([Advanced R Book](#))
  - [rlang](#) & [Tidy Evaluation](#) (CS)
- Making Blogs & Books:
  - [blogdown](#), [bookdown](#)
- Posting Code (GitHub, Stack Overflow): [reprex](#)