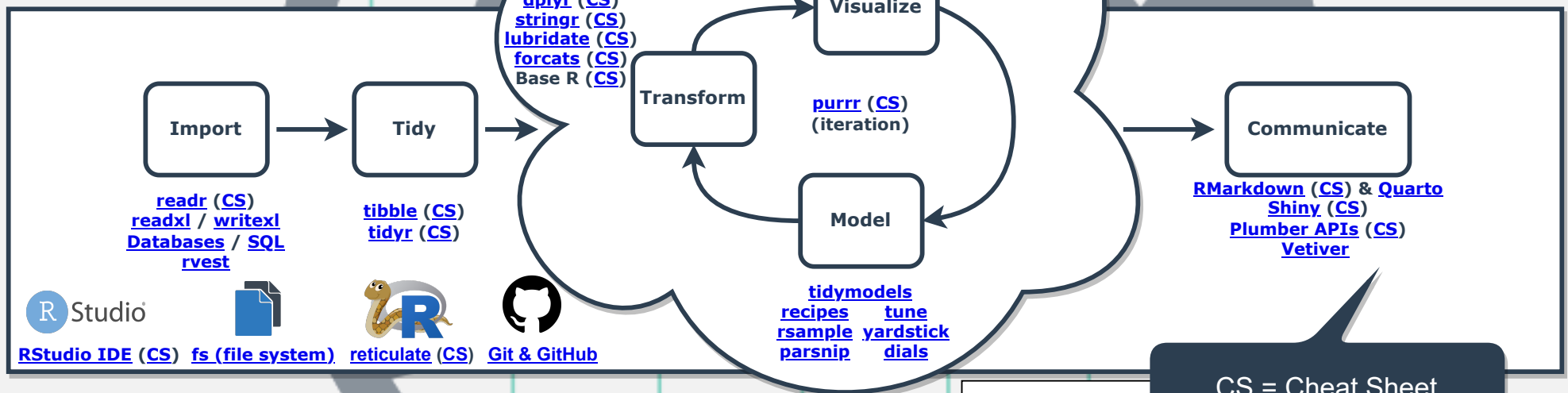
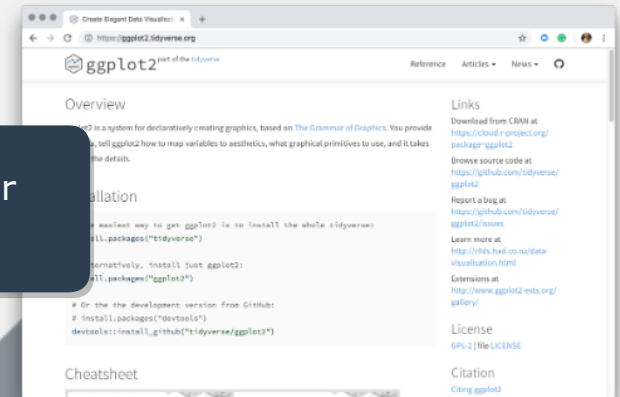


Data Science with R Workflow



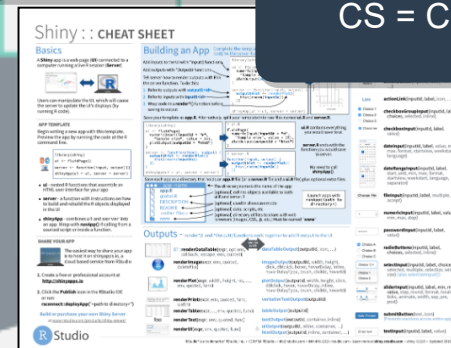
Click the links for Documentation

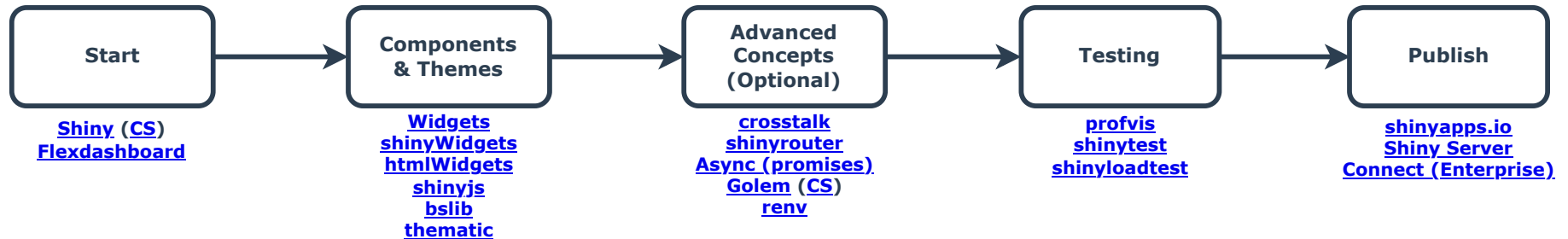


CS = Cheat Sheet

Important Resources

- **R For Data Science Book:** <http://r4ds.had.co.nz/>
- **Big Book of R:** <https://www.bigbookofr.com/>
- **Rmarkdown:** [Book](#) and [Cookbook](#)
- **More Cheatsheets:** <https://www.rstudio.com/resources/cheatsheets/>
- **tidyverse packages:** <https://www.tidyverse.org/>
- **Connecting to databases:** <https://db.rstudio.com/>
- **Reproducible Environments:** <https://environments.rstudio.com/>



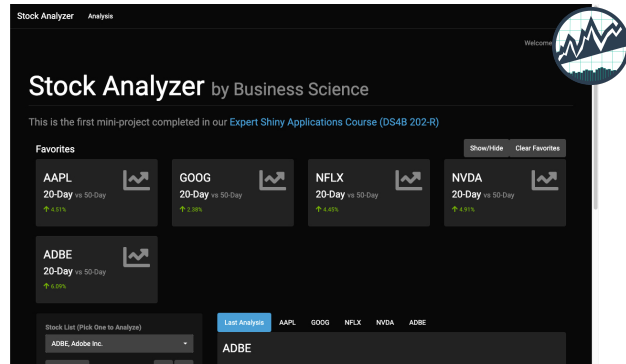


Flexdashboard Apps

Flexdashboard is an [RMarkdown-based](#) dashboard tool that can be used to integrate shiny components at runtime. Development is fast and efficient, but layouts are not as open to modification as building an app using Shiny.

Shiny Apps

Shiny is an R-Package that enables [web app development](#) from R. Contains R functions for common HTML structures, UI Controls (Components/Widgets), and web framework tools. The framework is highly flexible, but users require more knowledge of HTML & CSS.



Shiny App - AWS Multi-User App
 Built in Expert Apps Course ([Demo Our App Gallery](#))
[Start Learning Today with 5-Course R-Track Program](#)

Shiny Themes & Dashboards

[Flexdashboard Gallery](#)
[Themes](#)
[Layouts](#)

[Shiny Gallery](#)
[shinythemes](#)
[shinydashboard](#)
[shinydashboardPlus](#)

[Semantic](#)
[shiny.semantic](#)
[semantic.dashboard](#)

[Bootstrap 4](#)
[bs4Dash](#)

[Argon](#)
[argonR](#)
[argonDash](#)

[ShinyMobile \(CS\)](#)

Web Frameworks & Tools

Bootstrap
 & Themes

[Bootstrap 3](#)
[Bootstrap 4](#)
[Bootswatch](#)
[bslib](#)
[thematic](#)

Fonts & Icons

[Font Awesome](#)
[Google Fonts](#)

Chrome Browser

[Chrome DevTools](#)

Data Science with

Special Topics

Time Series Analysis

- Time Series Data Wrangling: [timetk](#)
- Time Series Visualization: [timetk](#)
- Feature Engineering: [timetk](#)
- Convert between classes: [timetk](#) & [tsbox](#)
- Generating Future Series: [timetk](#)

Forecasting

- Prophet, ARIMA, Boost, ML: [modeltime](#)
- Ensembles: [modeltime.ensemble](#)
- Resampling & Backtesting: [modeltime.resample](#)
- Deep Learning: [modeltime.gluonets](#)
- H2O AutoML: [modeltime.h2o](#)

Anomaly Detection

- Identify anomalies: [anomalize](#), [timetk](#)

Exploratory (EDA)

- [DataExplorer](#), [skimr](#), [correlationfunnel](#), [janitor](#)

Financial Analysis

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

Financial 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: [textrecipies](#), Book ([SMLTAR](#))

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

- APIs (getting lat/long, bboxes, & sf's):
 - [osmdata](#) - OpenStreet Overpass API
 - [osrm](#) - OpenStreet Routes API
 - [tmaptools](#) - OpenStreet Nominatum API
- Geocoding - [tidygeocoder](#)
- Simple Features (sf objects): [sf](#) (CS) (tidy)
- Spatial Objects (sp objects): [sp](#) (non-tidy, pre-sf)

Geospatial Viz

- Static:
 - [tmap](#) - Thematic Maps
 - [cartography](#) (CS) - Thematic Maps
- Interactive:
 - [mapview](#) - Quick interactive maps
 - [leaflet](#) (CS) - leaflet.js in R
 - [plotly](#) (CS) - plotly.js (maps) in R

Machine Learning

- AutoML: [H2O](#) (CS)
- ML (Tidymodels): [tidymodels.org](#)
 - [parsnip](#) - ML
 - [recipes](#) - Feature Engineering
 - [tune](#) - Hyperparameter Tuning
 - [rsample](#) - Resampling
 - [yardstick](#) - Accuracy Metrics
- ML (pre-Tidymodels): [caret](#) (CS)
- MLR: [mlr](#) & [mlr3](#) (CS)
- MLverse: [mlverse](#)

Deep Learning

- [R Interface to TensorFlow](#)
- [Keras](#) (CS), [TF Estimators](#), [TensorFlow \(Core\)](#)
- [Torch for R](#)

Speed & Scale

- Faster than dplyr & pandas: [data.table](#) (CS)
- Dplyr SQL & DT backends: [dtplyr](#), [dbplyr](#)
- Parallel Processing w/ purrr: [furrr](#)
- Larger than RAM: [Arrow](#), [sparklyr](#) (CS)

Interoperability

- Python: [reticulate](#) (CS)
- Java: [rJava](#)
- C++: [Rcpp](#)
- D3: [r2d3](#)

Miscellaneous Tools

- Production:
 - [vetiver](#), [plumber](#), [targets](#), [renv](#)
- Building R Packages: [R packages Book](#)
 - [devtools](#) (CS), [usethis](#), [pkgdown](#)
- Advanced Concepts ([Advanced R Book](#))
 - [rlang](#) & [Tidy Evaluation](#) (CS)
- Making Blogs & Books:
 - [blogdown](#), [bookdown](#)
- Posting Code (GitHub, Stack Overflow):
 - [reprex](#)