# RStudio IDE Cheat Sheet

learn more at www.rstudio.com

The RStudio IDE is an Integrated Development Environment in R that comes in three versions
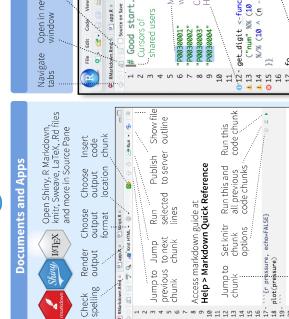
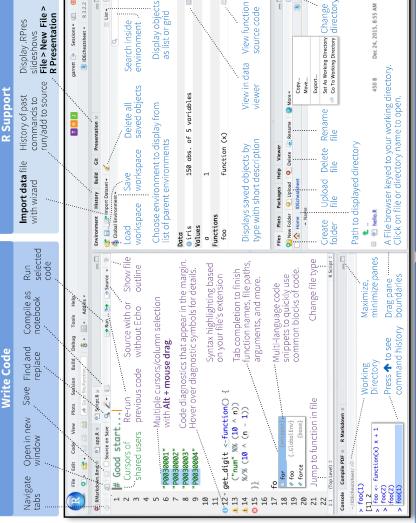Download all at **www.rstudio.com**. Each provides the same useful interface:

## Desktop IDE
A local version of the IDE for your desktop

## Open Source Server
for larger compute resources and remote access

## Professional Server
for teams that share large compute resources, large data, and uniform environments for collaboration

---

## Documents and Apps

Open Shiny, R Markdown, knitr, Sweave, LaTeX, .Rd files and more in Source Pane

- Check Spelling
- Render output
- Choose output format
- Choose output location
- Insert code chunk

Access markdown guide at **Help > Markdown Quick Reference**

- Jump to previous chunk
- Jump to next chunk
- Run selected lines
- Publish to server
- Show file outline

- Jump to chunk
- Set knitr chunk options
- Run this and all previous code chunks
- Run this code chunk

```
{r pressure, echo=FALSE}
plot(pressure)
```

RStudio recognizes that files named **app.R**, **server.R**, **ui.R**, and **global.R** belong to a Shiny app

- Run app
- Choose location to view app or server
- Publish to shinyapps.io or server
- Manage publish accounts

- Examine variables in executing environment
- Select function in traceback to debug

- Highlighted line shows where execution has paused
- Run commands in environment where execution has paused

Click next to line number to add/remove a breakpoint.

---

## Write Code

- Navigate tabs
- Open in new window
- Save
- Find and replace
- Compile as notebook
- Run selected code

- Cursors of shared users
- Re-run previous code
- Source with or without Echo
- Show file outline

`# Good start...`

Multiple cursors/column selection with **Alt + mouse drag**.

Code diagnostics that appear in the margin. Hover over diagnostic symbols for details.

```
"P0030001"
"P0030002"
"P0030003"
"P0030004"

get_digit <- function() {
  ("num" %%% (10 ^ n))
  %/% (10 ^ (n - 1))
}
```

Jump to function in file

- Syntax highlighting based on your file's extension
- Tab completion to finish function names, file paths, arguments, and more.
- Multi-language code snippets to quickly use common blocks of code.
- Change file type

- Press ↑ to see command history
- Working Directory
- Maximize, minimize panes
- Drag pane boundaries

---

## Debug Mode

Open with **debug()**, **browse()**, or a breakpoint. RStudio will open the debugger mode when it encounters a breakpoint while executing code.

Launch debugger mode from origin of error

Open traceback to examine the functions that R called before the error occurred

```
Console ~ /IDEcheatsheet/
> foo()
Error in get_digit(num, x) : :
Error!
```

- Show Traceback
- Rerun with Debug

```
Console ~ /IDEcheatsheet/
Next    Continue    Stop
```

- Step through code one line at a time
- Step into and out of functions to run
- Resume execution mode
- Quit debug execution mode

---

## R Support

- Import **data** file with wizard
- History of past commands to run/add to source
- Display .RPres slideshows
- **File > New File > R Presentation**

- Load workspace
- Save workspace
- Delete all saved objects
- Search inside environment
- Display objects as list or grid

Choose environment to display from list of parent environments

```
Data
 iris    150 obs. of 5 variables
Values
 a       1
Functions
 foo     function (x)
```

- Displays saved objects by type with short description
- View in data viewer
- View function source code

- Create folder
- Upload file
- Delete file
- Rename file
- Change directory

Path to displayed directory

A File browser keyed to your working directory. Click on file or directory name to open.

Dec 24, 2015, 8:55 AM    450 B

---

## Version Control with Git or SVN

Turn on at **Tools > Project Options > Git/SVN**

- Stage files:
- Show file diff
- Commit staged files
- Push/Pull to remote
- View History

- A Added
- D Deleted
- M Modified
- R Renamed
- ? Untracked

Open shell to type commands

master ▾    current branch

---

## Package Writing

**File > New Project > New Directory > R Package**

Turn project into package,

Enable roxygen documentation with **Tools > Project Options > Build Tools**

Roxygen guide at **Help > Roxygen Quick Reference**

- Build & Reload
- Check
- Clean and Rebuild
- Test Package
- Check Package
- Build Source Package
- Build Binary Package
- Document
- Configure Build Tools...

---

## RStudio Pro Features

**Share Project** — Active shared collaborators — Start **new R Session** in current project

- Close R Session in project
- **Select R Version**

Share Project with Collaborators... collaborators

- R version 3.2.2
- R version 3.1.3
- R version 3.0.3
- R version 2.15.3

## Project System

**File > New Project**

RStudio saves the call history, workspace, and working directory associated with a project. It reloads each when you re-open a project.

- Open Project...
- New Project...
- Close Project...
- Share Project...
- IDEcheatsheet
- RStudio-Essentials
- Essentials
- shiny-examples
- Clear Project List
- Project Options...

Name of current project

RStudio opens plots in a dedicated Plots pane

- Navigate recent plots
- Open in window
- **Export plot**
- Delete plot
- Delete all plots

GUI Package manager lists every installed package

- Install Packages
- Update Packages
- Create reproducible package library for your project

- scales — Scale Functions for Visualization
- shiny — Web Application Framework for R
- shinydashboard — Create Dashboards with 'Shiny'

Click to load package with **library()**. Unclick to detach package with **detach()**

- Package version
- Delete from installed library

RStudio opens documentation in a dedicated Help pane

- Home page of helpful links
- Search within help file
- Search for help file

Viewer Pane displays HTML content, such as Shiny apps, RMarkdown reports, and interactive visualizations

- Stop Shiny app
- Publish to shinyapps.io, rpubs, RSConnect, ...
- Refresh

**View(<data>)** opens spreadsheet like view of data set

| Sepal.Length | Sepal.Width | Petal.Length | Petal.Width | Species |
|---|---|---|---|---|
| All | All | All | All | All |
| 1 | 5.1 | 3.5 | 1.4 | 0.2 | setosa |

- Filter rows by value or value range
- Sort by values
- Search for value

---

More cheat sheets at **http://www.rstudio.com/resources/cheatsheets/**

Learn more at **support.rstudio.com** • RStudio IDE 0.99.832 • Updated: 01/16

## 1 LAYOUT

| | Windows/Linux | Mac |
|---|---|---|
| Move focus to Source Editor | Ctrl+1 | Ctrl+1 |
| Move focus to Console | Ctrl+2 | Ctrl+2 |
| Move focus to Help | Ctrl+3 | Ctrl+3 |
| Show History | Ctrl+4 | Ctrl+4 |
| Show Files | Ctrl+5 | Ctrl+5 |
| Show Plots | Ctrl+6 | Ctrl+6 |
| Show Packages | Ctrl+7 | Ctrl+7 |
| Show Environment | Ctrl+8 | Ctrl+8 |
| Show Git/SVN | Ctrl+9 | Ctrl+9 |
| Show Build | Ctrl+0 | Ctrl+0 |

## 2 RUN CODE

| | Windows/Linux | Mac |
|---|---|---|
| **Search command history** | **Ctrl+↑** | **Cmd+↑** |
| Navigate command history | ↑/↓ | ↑/↓ |
| Move cursor to start of line | Home | Cmd+← |
| Move cursor to end of line | End | Cmd+→ |
| Change working directory | Ctrl+Shift+H | Ctrl+Shift+H |
| **Interrupt current command** | **Esc** | **Esc** |
| **Clear console** | **Ctrl+L** | **Ctrl+L** |
| Quit Session (desktop only) | Ctrl+Q | Cmd+Q |
| **Restart R Session** | **Ctrl+Shift+F10** | **Cmd+Shift+F10** |
| **Run current line/selection** | **Ctrl+Enter** | **Cmd+Enter** |
| Run current (retain cursor) | Alt+Enter | Option+Enter |
| Run from current to end | Ctrl+Alt+E | Cmd+Option+E |
| Run the current function | Ctrl+Alt+F | Cmd+Option+F |
| Source a file | Ctrl+Shift+O | Cmd+Shift+O |
| **Source the current file** | **Ctrl+Shift+S** | **Cmd+Shift+S** |
| Source with echo | Ctrl+Shift+Enter | Cmd+Shift+Enter |

## 3 NAVIGATE CODE

| | Windows/Linux | Mac |
|---|---|---|
| **Goto File/Function** | **Ctrl+.** | **Ctrl+.** |
| Fold Selected | Alt+L | Cmd+Option+L |
| Unfold Selected | Shift+Alt+L | Cmd+Shift+Option+L |
| Fold All | Alt+O | Cmd+Option+O |
| Unfold All | Shift+Alt+O | Cmd+Shift+Option+O |
| Go to line | Shift+Alt+G | Cmd+Shift+Option+G |
| Jump to | Shift+Alt+J | Cmd+Shift+Option+J |
| Switch to tab | Ctrl+Shift+. | Ctrl+Shift+. |
| Previous tab | Ctrl+F11 | Ctrl+F11 |
| Next tab | Ctrl+F12 | Ctrl+F12 |
| First tab | Ctrl+Shift+F11 | Ctrl+Shift+F11 |
| Last tab | Ctrl+Shift+F12 | Ctrl+Shift+F12 |
| Navigate back | Ctrl+F9 | Cmd+F9 |
| Navigate forward | Ctrl+F10 | Cmd+F10 |
| Jump to Brace | Ctrl+P | Ctrl+P |
| Select within Braces | Ctrl+Shift+Alt+E | Ctrl+Shift+Alt+E |
| Use Selection for Find | Ctrl+F3 | Cmd+E |
| Find in Files | Ctrl+Shift+F | Cmd+Shift+F |
| Find Next | Win: F3, Linux: Ctrl+G | Cmd+G |
| Find Previous | W: Shift+F3, L: Ctrl+Shift+G | Cmd+Shift+G |
| Jump to Word | Ctrl+←/→ | Option+←/→ |
| Jump to Start/End | Ctrl+↑/↓ | Cmd+←/→ |

## 4 WRITE CODE

| | Windows /Linux | Mac |
|---|---|---|
| **Attempt completion** | **Tab or Ctrl+Space** | **Tab or Cmd+Space** |
| Navigate candidates | ↑/↓ | ↑/↓ |
| Accept candidate | Enter, Tab, or → | Enter, Tab, or → |
| Dismiss candidates | Esc | Esc |
| Undo | Ctrl+Z | Cmd+Z |
| Redo | Ctrl+Shift+Z | Cmd+Shift+Z |
| Cut | Ctrl+X | Cmd+X |
| Copy | Ctrl+C | Cmd+C |
| Paste | Ctrl+V | Cmd+V |
| Select All | Ctrl+A | Cmd+A |
| Delete Line | Ctrl+D | Cmd+D |
| Select | Shift+[Arrow] | Shift+[Arrow] |
| Select Word | Ctrl+Shift+←/→ | Option+Shift+←/→ |
| Select to Line Start | Alt+Shift+← | Cmd+Shift+← |
| Select to Line End | Alt+Shift+→ | Cmd+Shift+→ |
| Select Page Up/Down | Shift+PageUp/Down | Shift+PageUp/Down |
| Select to Start/End | Shift+Alt+←/→ | Cmd+Shift+←/→ |
| Delete Word Left | Ctrl+Backspace | Ctrl+Opt+Backspace |
| Delete Word Right | | Option+Delete |
| Delete to Line End | | Ctrl+K |
| Delete to Line Start | | Option+Backspace |
| Indent | Tab (at start of line) | Tab (at start of line) |
| Outdent | Shift+Tab | Shift+Tab |
| Yank line up to cursor | Ctrl+U | Ctrl+U |
| Yank line after cursor | Ctrl+K | Ctrl+K |
| Insert yanked text | Ctrl+Y | Ctrl+Y |
| **Insert <-** | **Alt+-** | **Option+-** |
| **Insert %>%** | **Ctrl+Shift+M** | **Cmd+Shift+M** |
| Show help for function | F1 | F1 |
| Show source code | F2 | F2 |
| New document | Ctrl+Shift+N | Cmd+Shift+N |
| New document (Chrome) | Ctrl+Alt+Shift+N | Cmd+Shift+Alt+N |
| Open document | Ctrl+O | Cmd+O |
| Save document | Ctrl+S | Cmd+S |
| Close document | Ctrl+W | Cmd+W |
| Close document (Chrome) | Ctrl+Alt+W | Cmd+Option+W |
| Close all documents | Ctrl+Shift+W | Cmd+Shift+W |
| Extract function | Ctrl+Alt+X | Cmd+Option+X |
| Extract variable | Ctrl+Alt+V | Cmd+Option+V |
| Reindent lines | Ctrl+I | Cmd+I |
| **(Un)Comment lines** | **Ctrl+Shift+C** | **Cmd+Shift+C** |
| Reflow Comment | Ctrl+Shift+/ | Cmd+Shift+/ |
| Reformat Selection | Ctrl+Shift+A | Cmd+Shift+A |
| Select within braces | Ctrl+Shift+E | Ctrl+Shift+E |
| Show Diagnostics | Ctrl+Shift+Alt+P | Cmd+Shift+Alt+P |
| Transpose Letters | | Ctrl+T |
| Move Lines Up/Down | Alt+↑/↓ | Option+↑/↓ |
| Copy Lines Up/Down | Shift+Alt+↑/↓ | Cmd+Option+↑/↓ |
| Add New Cursor Above | Ctrl+Alt+Up | Ctrl+Alt+Up |
| Add New Cursor Below | Ctrl+Alt+Down | Ctrl+Alt+Down |
| Move Active Cursor Up | Ctrl+Alt+Shift+Up | Ctrl+Alt+Shift+Up |
| Move Active Cursor Down | Ctrl+Alt+Shift+Down | Ctrl+Alt+Shift+Down |
| Find and Replace | Ctrl+F | Cmd+F |
| Use Selection for Find | Ctrl+F3 | Cmd+E |
| Replace and Find | Ctrl+Shift+J | Cmd+Shift+J |

## 5 DEBUG CODE

| | Windows/Linux | Mac |
|---|---|---|
| Toggle Breakpoint | Shift+F9 | Shift+F9 |
| Execute Next Line | F10 | F10 |
| Step Into Function | Shift+F4 | Shift+F4 |
| Finish Function/Loop | Shift+F6 | Shift+F6 |
| Continue | Shift+F5 | Shift+F5 |
| Stop Debugging | Shift+F8 | Shift+F8 |

## 6 VERSION CONTROL

| | Windows/Linux | Mac |
|---|---|---|
| Show diff | Ctrl+Alt+D | Ctrl+Option+D |
| Commit changes | Ctrl+Alt+M | Ctrl+Option+M |
| Scroll diff view | Ctrl+←/→ | Ctrl+←/→ |
| Stage/Unstage (Git) | Spacebar | Spacebar |
| Stage/Unstage and move to next | Enter | Enter |

## 7 MAKE PACKAGES

| | Windows/Linux | Mac |
|---|---|---|
| Build and Reload | Ctrl+Shift+B | Cmd+Shift+B |
| **Load All (devtools)** | **Ctrl+Shift+L** | **Cmd+Shift+L** |
| **Test Package (Desktop)** | **Ctrl+Shift+T** | **Cmd+Shift+T** |
| Test Package (Web) | Ctrl+Alt+F7 | Cmd+Alt+F7 |
| Check Package | Ctrl+Shift+E | Cmd+Shift+E |
| **Document Package** | **Ctrl+Shift+D** | **Cmd+Shift+D** |

## 8 DOCUMENTS AND APPS

| | Windows/Linux | Mac |
|---|---|---|
| Preview HTML (Markdown, etc.) | Ctrl+Shift+K | Cmd+Shift+K |
| **Knit Document (knitr)** | **Ctrl+Shift+K** | **Cmd+Shift+K** |
| Compile Notebook | Ctrl+Shift+K | Cmd+Shift+K |
| Compile PDF (TeX and Sweave) | Ctrl+Shift+K | Cmd+Shift+K |
| Insert chunk (Sweave and Knitr) | Ctrl+Alt+I | Cmd+Option+I |
| Insert code section | Ctrl+Shift+R | Cmd+Shift+R |
| Re-run previous region | Ctrl+Shift+P | Cmd+Shift+P |
| Run current document | Ctrl+Alt+R | Cmd+Option+R |
| **Run from start to current line** | **Ctrl+Alt+B** | **Cmd+Option+B** |
| **Run the current code section** | **Ctrl+Alt+T** | **Cmd+Option+T** |
| Run previous Sweave/Rmd code | Ctrl+Alt+P | Cmd+Option+P |
| Run the current chunk | Ctrl+Alt+C | Cmd+Option+C |
| Run the next chunk | Ctrl+Alt+N | Cmd+Option+N |
| Sync Editor & PDF Preview | Ctrl+F8 | Cmd+F8 |
| Previous plot | Ctrl+Alt+F11 | Cmd+Option+F11 |
| Next plot | Ctrl+Alt+F12 | Cmd+Option+F12 |
| Show Keyboard Shortcuts | Alt+Shift+K | Option+Shift+K |

## Why RStudio Server Pro?

Learn more at **support.rstudio.com** • RStudio IDE 0.99.832 • Updated:01/16

Do everything you would do with the open source server with a commercial license, support, and more.

- edit the same project at the same time as others
- switch easily from one version of R to a different version
- open and run multiple R sessions simultaneously
- see what you and others are doing on your server
- tune your resources to improve performance
- integrate with your authentication, authorization, and audit practices

Download a free 45 day evaluation at
**www.rstudio.com/products/rstudio-server-pro/**

More cheat sheets at http://www.rstudio.com/resources/cheatsheets/