Getting started with RStudio

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What is RStudio?

A user interface for R (and other programs commonly used with R) meant to improve productivity. Most of this presentation will be me showing some of the main features of RStudio. The following slides will mostly serve as a collection of links to useful resources.

Installation

RStudio is a program that combines the functionality of many other programs into a clean, intuitive interface. You will need to install these other programs separately. Install the following:

- R: `http://cran.fhcrc.org/`
- TeX implementation (such as MiKTeX, if you are a Windows user: `http://miktex.org/2.9/setup`)
- RStudio: `http://rstudio.org/download/desktop`
- Git: `http://git-scm.com/downloads`
- Register for GitHub: `https://github.com/`

Keyboard Shortcuts

For full listing, in RStudio click Help >> Keyboard Shortcuts

- Move to text editor: ctrl+1
- Move to console: ctrl+2
- Switch text tabs: ctrl+alt+left and ctrl+alt+right
- Page through plot history: ctrl+shift+pageup and ctrl+shift+pagedown
- Run line of code or highlighted code: ctrl+enter
- Re-Run previous code region: ctrl+shift+P

Version control system (Git)

This may not be as immediately relevant now, but it is good
to familiarize yourself with Git (or any other version control
system), as it will become more useful as you take on larger,
more complex projects often involving many people. For
further details here is a good guide: http://git-scm.com/book

Git and Github

Brief definitions:

- Git: a local version control system for your machine that is able to interface with servers for project collaboration
- Github: a free website interface and server location that allows sharing (and backup) of projects tracked by Git

Git and Github

Key words:

- Git initialization: telling Git to start tracking a folder where you will be keeping your project files.
- Commit: after you have saved/updated a version of a file you want to track, 'commit' to tell Git you want to remember that version
- Push: after you have committed a version of a file suitable for sharing, 'push' to the server (e.g. Github)
- Pull: if you want to start working on a project, 'pull' the entire folder of files from the server (e.g. Github); you will automatically also be tracking locally via Git

Other useful links

Google's R Style Guide: `http://google-styleguide.googlecode.com/svn/trunk/google-r-style.html`
LaTeX reference:
`http://en.wikibooks.org/wiki/LaTeX/Mathematics`

'Fun' R book

Easy to read book of useful tips, best practices, and quirks that R has. R Inferno: `http://www.burns-stat.com/pages/Tutor/R_inferno.pdf`