

Introduction to Biological Statistics

Center for Computational Biology and Bioinformatics
Division of Statistics and Scientific Computation

Course Goals

- Broad overview of **topics** and **tools** for statistical analysis.
- Target audience is biology graduate students
- Sessions will involve a mix of lecture and hands-on work

Week 1: R Installation and Basics

Objectives

- Install R and R Studio
- Learn terminology and anatomy of R:
 - interpreter, script editor
 - object, variable, value
 - function, argument
 - assignment, equivalence

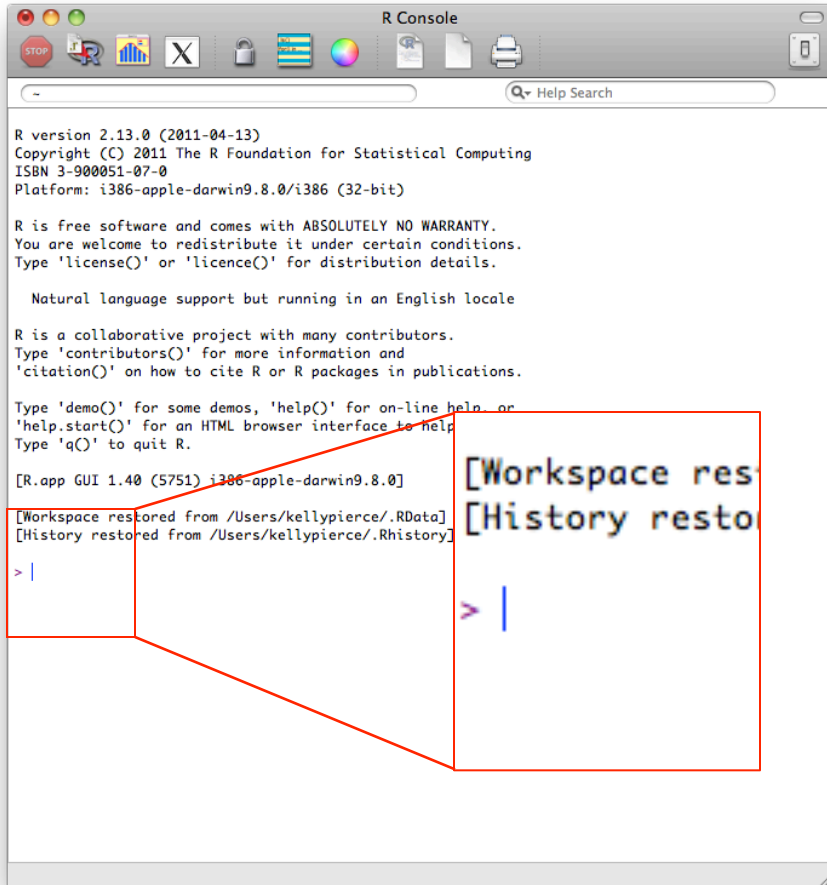
What is R?

- **Object-oriented** scripting language
- Available for Windows, Mac and Linux

Why use R?

- More flexible than Excel
- Widely used in biological sciences
- Online help communities
- Can generate publication-quality figures
- **Free**, open source

What do I even do with this?!



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R version 2.13.0 (2011-04-13)
Copyright (C) 2011 The R Foundation for Statistical Computing
ISBN 3-900051-07-0
Platform: i386-apple-darwin9.8.0/i386 (32-bit)

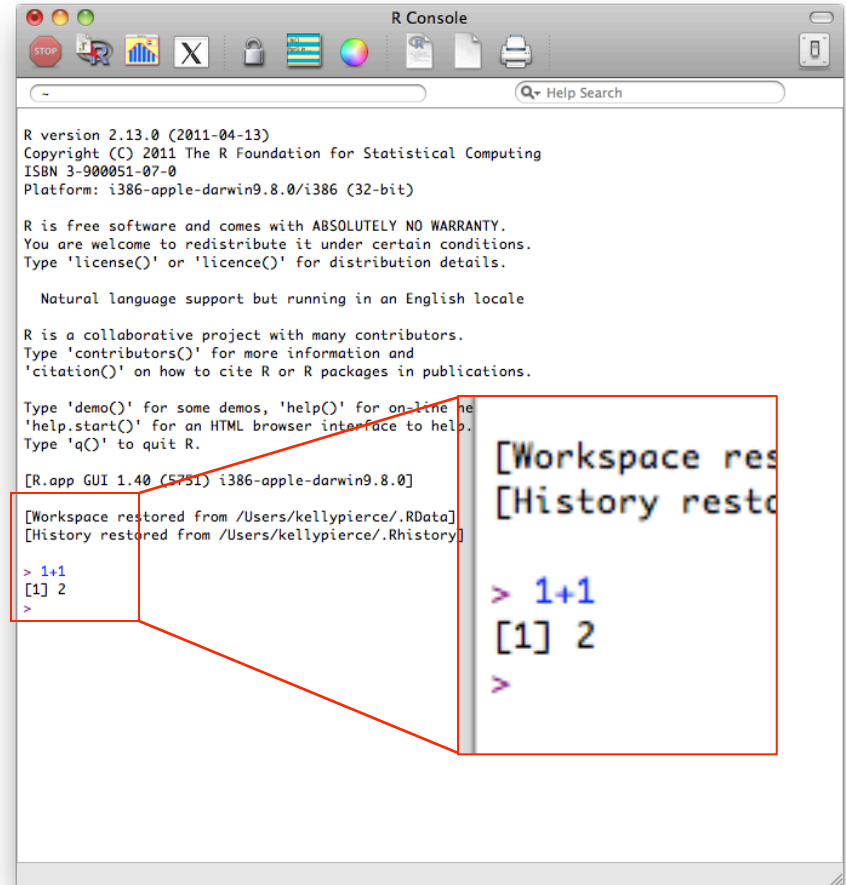
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Natural language support but running in an English locale

R is a collaborative project with many contributors.
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Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[R.app GUI 1.40 (5751) i386-apple-darwin9.8.0]
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> 1+1
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How do I get R?

<http://cran.us.r-project.org/>

(select a geographically near mirror)

also download R studio, a GUI for R with some useful features:

<http://www.rstudio.com/ide/download/>

(select the desktop version)