

Introduction to the R system

- R is a system for statistical computation and graphics
- It is free software and runs on Windows, MacOS, and Unix-like systems (Linux)
 - It is open-source
 - <http://www.r-project.org/>

Historical background

- R is very similar to the S language and environment, developed at Bell Laboratories (formerly AT&T) by John Chambers and colleagues (1976 -)
- S-PLUS is a commercial (and expensive) implementation of the S environment for MSWindows (S-PLUS 7 at present)
- Ross Ihaka and Robert Gentleman, University of Auckland, New Zealand, produced R as a free and open-source version of S in 1996

Robert Gentleman and Ross Ihaka











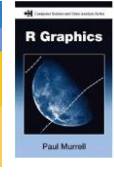
Ross Ihaka and Robert Gentleman at the Black Crow Cafe, Auckland NZ (source: R. Ihaka)



Advertisement in The Economist (April 2015)

Some R core group members and books

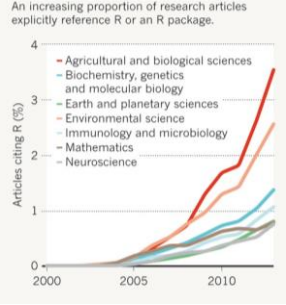






<http://www.r-project.org/contributors.html>
<http://www.r-bloggers.com/celebrating-r-commit-50000/>

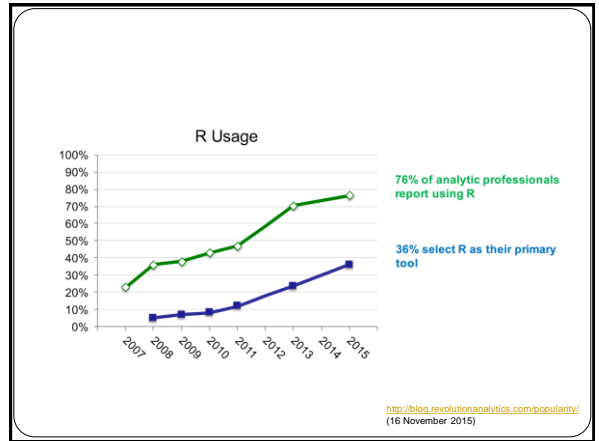
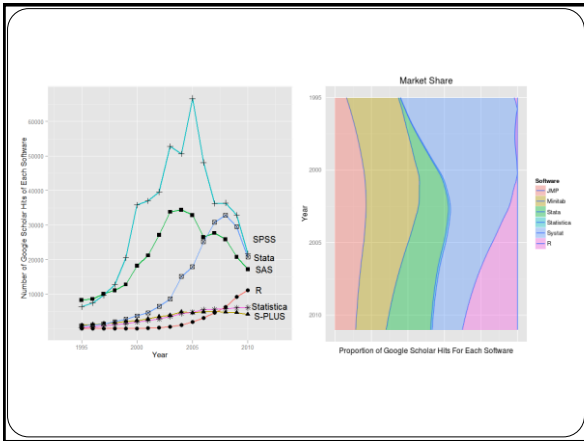
The rising tide of R

An increasing proportion of research articles explicitly reference R or an R package.

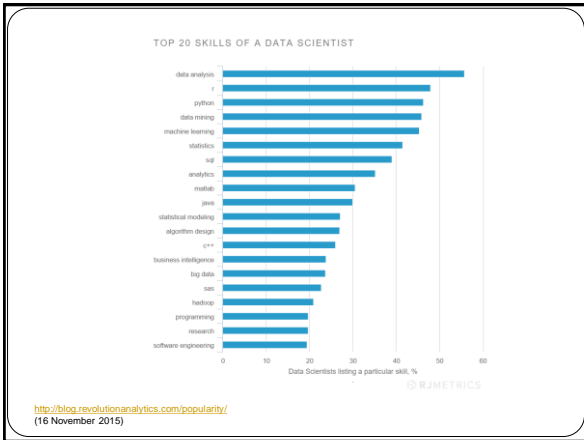


- Statistics teaching at universities
 - ...even though it may not be the best for learning the core ideas of statistics....
- Statistical consulting

Programming tools: Adventures with R, Nature, 2015



<http://blog.revolutionanalytics.com/popularity/>
(16 November 2015)



<http://blog.revolutionanalytics.com/popularity/>
(16 November 2015)

R-mailing lists for special topics:

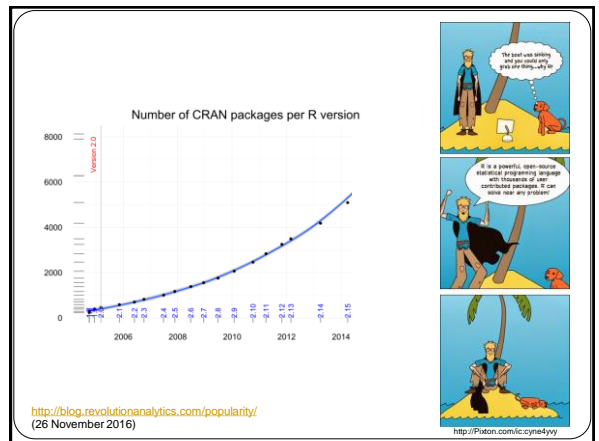
<http://www.r-project.org/mail.html>

- [R-SIG-Mac](#): R Special Interest Group on Mac ports of R
- [R-sig-DB](#): R SIG on Database Interfaces
- [R-SIG-Debian](#): R Special Interest Group for Debian ports of R
- [R-sig-dynamic-models](#): Special Interest Group for Dynamic Simulation Models in R
- [R-sig-Epi](#): R for epidemiological data analysis
- [R-sig-ecology](#): Using R in ecological data analysis
- [R-SIG-Fedora](#): R Special Interest Group for Fedora and Redhat ports of R
- [R-SIG-Finance](#): Special Interest Group for 'R in Finance'
- [R-sig-Geo](#): R Special Interest Group on using Geographical data and Mapping
- [R-sig-g](#): R SIG on g-Raphical models
- [R-SIG-GLI](#): R Special Interest Group on GLI Development
- [R-SIG-HPC](#): R SIG on High-Performance Computing
- [R-sig-jobs](#): R SIG List for Announcements of Jobs where R is used
- [R-sig-mixed-models](#): R SIG on Mixed Effect Models, notably lmer() related
- [R-sig-mechanika](#): R SIG on the R Extension for Mechnika
- [R-sig-networks](#): R SIG for users and developers of network- or graph-related software within R
- [R-sig-phylo](#): R SIG on phylogenetic and comparative methods and analyses
- [R-sig-QA](#): R SIG on Quality Assurance & Validation
- [R-sig-Robust](#): R SIG on Robust Statistics
- [R-sig-teaching](#): SIG on Teaching Statistics (and more) using R
- [R-sig-Wiki](#): SIG on the Development of an "R Wiki"

The present R situation

- Explosive increase in use and popularity
- Large number of books being published
- Strong "community" and internet presence (e.g. heavy traffic on R help list)
- Extremely active core group, mostly consisting of university statisticians
- Modern style international collaboration

The comic strip shows a character searching for R help. The first panel shows a question mark. The second panel shows the character searching. The third panel shows the search results: 'Your search returned zero results!'. The fourth panel shows the character looking at a search result for 'RESEARCH: how to get your R code to work on other people's machines' and saying 'I broke myself!'.



<http://blog.revolutionanalytics.com/popularity/>
(26 November 2016)



<http://Piston.com/icc-cym4xy>

