An update on useR! 2013 conference

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RUGS
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Outline

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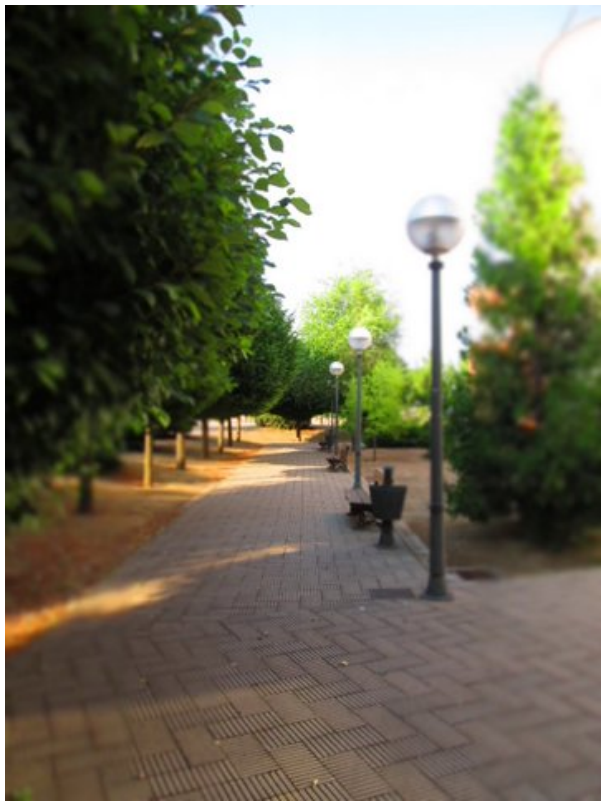

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- Get access to a broad array of predictive analytic and cutting-edge statistical analysis tools.
- Develop analytics applications as much as five times faster.
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- Develop analytics applications as much as five times faster.
- Extend these tools with functions from a contributed package CSAN repository.
- Also working on a new implementation of the S language, that is focused on improving the memory management issues of R.
- What defines the S language?
  - Brown (1984) $\rightarrow$ Blue (1988) $\rightarrow$ White (1992) $\rightarrow$ Green (1998).

Mango Solutions

- A UK based company, started in 2002.
- They provide the following services:
  - Consulting
  - Training, and
  - R validation.

What I understand from this:

- More people *want* to use the analysis tools within R.
- Like Android, it is getting difficult to maintain compatibility across versions of R and of packages.

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R version 3.0.0 - what's new?

- Duncan Murdoch gave a talk on the latest version of R.
- What does R x.y.z actually mean?
- Support for numeric indices 2^{31} and larger. So now

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> x[2^31] <- y
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  will work on 64-bit machines, extending the x-vector if necessary.
- Bounds checking when calling compiled code.
- Vignettes can now be written with engines other than Sweave. Any engine that processes R code + documentation to create a latex file can be used, e.g. knitr. See this page in the Writing R Extensions section.
- What exactly has helped in the dramatic increase in R users?

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BigR Data

- Hadley Wickham gave a talk on handling bigger data in R
- The full talk can be found here:
  `http://bit.ly/bigrdata2`
- "Visualisation reveals the unexpected but does not scale well; models scale well, but they are so precise that they seldom reveal new things"
- Who doesn't use at least one of reshape2, plyr or ggplot2?
- Two new packages for handling big big data:
  1. dplyr
  2. bigvis

MCMC or INLA?

- Havard Rue gave a talk on R-INLA
- Steve Scott gave a talk on BOOM
- Both are methods for carrying out Bayesian inference.
- Although the latter is more general, I am keen to learn about INLA.

Naming conventions in R

- A humorous talk on the inconsistencies of R users!
- Even base R does not one of the following consistently:
  - lowerCamelCase
  - upperCamelCase
  - alllowercase
  - period.separated
  - underscore_separated
- Read more about it here.

data.table Package

- data.table can be thought of as providing an enhanced data frame.
- When used correctly, it can be much faster than a data.frame
- The main features are:
  - Use of keys for indexing rows.
  - Fast grouping
  - Fast time series joins.

Must learn packages (from my p.o.v, of course

- Shiny!
- knitr (and markdown)
- ??

More info:

- URL for this year's conference:
  `http://www.edii.uclm.es/~useR-2013/`
- URL for next year's conference:
  `http://user2014.stat.ucla.edu/`
- TeX file (rugs_useR2013.tex) for this presentation: On github at singator/rugs