R's Participation in the Google Summer of Code 2011

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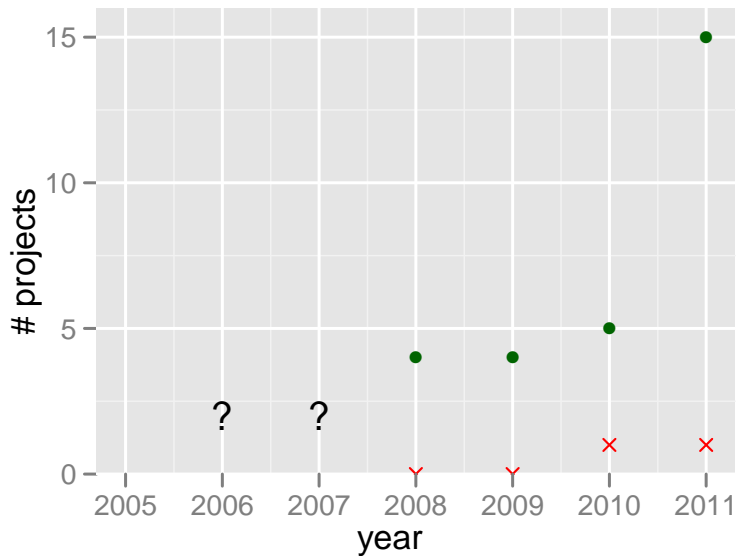Ottawa, Ottawa/Canada

Nash Information Services Inc.

Google Summer of Code

- Open-source software **coding** projects
- Results can be used as part of thesis or article
- Student stipend: US$ 5000 (3 installments, after passing evaluation)
- Mentoring Organization: US$ 500 / student

History of GSoC-R

- GUI/images/visualisation: 7 projects
- Optimization: 4 projects (2 also visualisation)
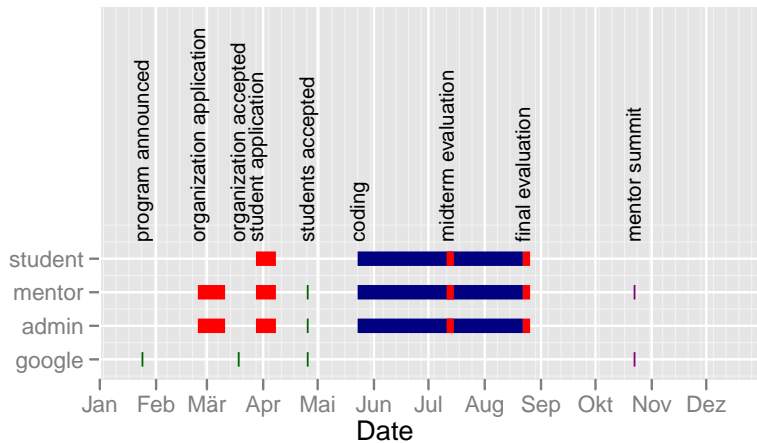- High performance computation: OpenMP

This year's projects

- Manipulating RStudio Graphics Towards Creating Intuitive Mathematical Comprehension
- Developing a hyperSpec GUI
- Cranvastime: Interactive longitudinal and temporal data plots
- A GUI based package to assist optimization problems in R
- Convergence acceleration of the Expectation-Maximization (EM) algorithms in computational statistics: A suite of cutting-edge acceleration schemes
- DClusterm: Model-based detection of disease clusters
- Exploratory visualization of dynamic stochastic processes.
- HUGE: High-dimensional Undirected Graph Estimation
- Image Analysis in R
- OpenMP parallel framework for R
- Optile category order optimization for graphical displays of categorical data
- Proposal for Components in TradeAnalytics Toolchain enhancements
- R-EM-Accelerator—Smarter Iterative Schemes Save Your Time
- SMART: Sparse Multivariate Adaptive Regression Toolkit

Aims

- Introduce students into ®R developer community

- Push forward mentor's (or student's) project

- Long term impact
  - impact of the code
    e.g. *roxygen*
  - long term commitment of the people
    students → mentors: e.g. I. Fellows, F. Schnbrodt

Timeline

Communication Channels

- e-mail
  - students + mentors: `gsoc-r@googlegroups.com`
  - ®mentors only: `gsoc-mentors@r-project.org`
  - all GSoC mentors:
    `google-summer-of-code-mentors-list@googlegroups.com`
  - project-specific mailing lists

- instant messaging

- skype

- personal meetings

- ✔ 2 mentors / student
- ✔ 2 admins
- ✔ "ping" projects once in a while
- time line is oriented at US summer holidays.
- ⚡ vanishing mentor (✔: turned up again just in time)
- ⚡ vanishing student
  - ⤳ failed in midterm evaluation
  - overall GSoC failure rate ca. 10 – 20 %

Advice for Mentors

- Start to look **early** (January) for students

- Look for co-mentor

- Plan time
  like for student doing research practicum or master's thesis

- Keep in mind: Coding is in holiday time

- Keep in mind: students range from 1st year to PhD student

Discussion

- Student application much easier accepted for mentor proposal
  - How to find mentors for students with their own proposal?
  - Should we reserve some slots exclusively for student proposals?

- Bad mentor proposal
  - One proposal was very much in the critique by the other mentors (for statistics reasons).
  - (Obviously,) the student was not accepted – but due to "mentor failure", not due to weak student.
  - Does this need attention?

- Admins for next year?