

R project in Google Summer of code (R-GSOC)

Toby Dylan Hocking

toby.hocking@r-project.org

<https://github.com/rstats-gsoc/gsoc2017/wiki>

26 May 2017

Google Summer of Code (GSOC) approximate timeline

Student gets paid for writing free/open-source code for 3 months.

Jan Admins for organizations e.g. R, LibreOffice, MariaDB, OpenStreetMap etc apply to Google.
<https://summerofcode.withgoogle.com/organizations/>

Feb Mentors propose projects for each org.

Mar Students submit project proposals to Google.

Apr Google gives funding for n students to an org.

May The top n students are selected.

June Students begin coding.

July Midterm evaluation.

Aug Final evaluation.

I have participated since 2012 as an **admin** and **mentor** for the R project.

Mentors propose 3-month coding projects

All GSOC projects should:

- ▶ Result in free/open-source software.
- ▶ Be 3 months of full time work for a student.
- ▶ Include writing documentation and tests.
- ▶ Not include original research.

R GSOC projects typically involve package development:

- ▶ Porting/interfacing code from some other language, e.g. `re2r` package interfaces RE2 C++ library, Qin Wenfeng 2016.
- ▶ Coding an algorithm from a research paper, e.g. `bigoptim` package for Stochastic Average Gradient algorithm, Ishmael Belghazi 2015.
- ▶ Extending some existing package, e.g. `postCP` package, Malith Jayaweera 2016.

Mentors write coding project proposals

`https://github.com/rstats-gsoc/gsoc2017/wiki/
table-of-proposed-coding-projects`

Each proposal should be posted to our wiki with:

Background/related work What problem do you want to solve, and why aren't existing R packages good enough?

Coding plan Detailed outline of functionality to implement.

Expected impact Will the package be useful for the R community?

Mentor bios contact info and qualifications (package dev and GSOC experience). Two mentors required! (ideally from different institutions)

Tests exercises that students can do to prove they are capable of the coding project. The harder the tests, the easier it will be to choose the right student!

Mentor obligations

Jan Read our wiki/FAQs and sign up to the gsoc-r list.
<https://github.com/rstats-gsoc/gsoc2017/wiki>

Feb Write project proposal on our wiki.

Mar Login to google system to comment on submitted applications.

June-Aug Mentoring students via weekly skype calls.

Throughout, you must be available and responsive to student questions via email!

- ▶ The primary goal of RGSOC is to teach the students about free/open-source R package development.
- ▶ Advancing your particular project should be considered a secondary concern.
- ▶ Mentors do NOT get paid (but they do get a summer student to write code for their project).

Student timeline

- Jan** Check the wiki for project proposals, start working on project tests.
- Feb** Submit test solutions to mentors, and tell them why you are interested in the project.
- Mar** Write an application using our template, and submit it to Google.
- May** If you are selected, begin “bonding” with mentors and preparing for the coding project.
- Jun** Coding period starts. Commit and push daily. Ask mentors questions via email and weekly skype calls. Expect to work about 40 hours per week.
- July-Aug** Midterm and final evaluations – should be no problem if you are in touch with mentors.

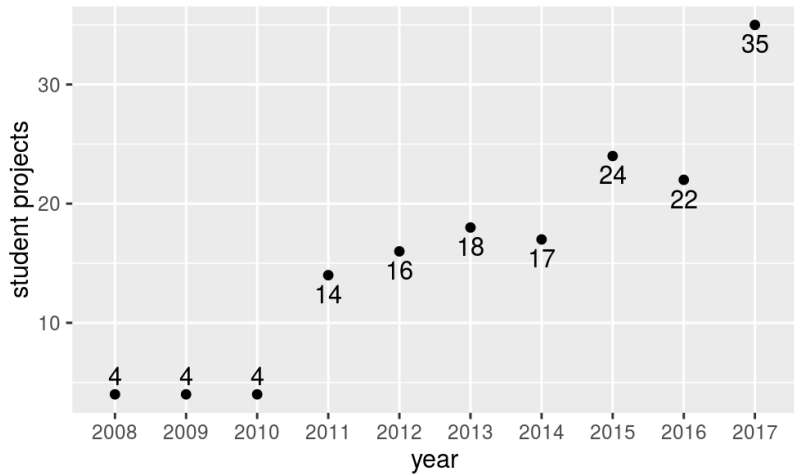
Students get paid an amount which depends on the country of their university.

Students who came back as mentors this year

For example,

- ▶ Akash Tandon wrote Rperform as a student in 2015-2016, now lead mentor on same project.
- ▶ Carson Sievert improved Animint as a student in 2014, now co-mentoring 2015-2017.
- ▶ Vijay Barve worked on biodiversity data packages as a student in 2012-2015, now a co-mentor 2016-2017.
- ▶ Narayani Barve worked on Ecological Niche Models as a student in 2014, now a co-mentor 2016-2017.
- ▶ Qiang Kou extended mzR as a student in 2014, now co-mentoring machine learning projects 2016-2017.

RGSOC is more and more popular



Thanks!

Please consider participating as a mentor or student in GSOC2018!
<https://github.com/rstats-gsoc/gsoc2018/wiki>

Any questions?

Toby Dylan Hocking
toby.hocking@r-project.org