Continuous integration in a social-coding world

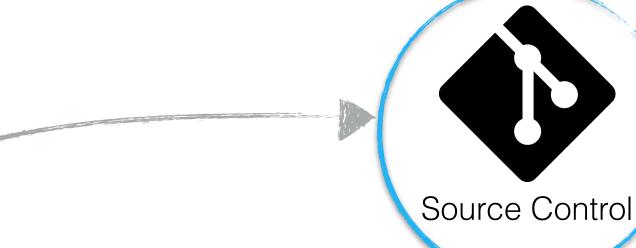
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Alexander Serebrenik @aserebrenik





Commit

Sample of large and active GH repos

- not forks
- Java, Python, or
- ≥ 1 year
 - Ruby both commits * ≥ 10 changes last month
 - and pull requests
- * ≥ 10 contributors

223 projects rails

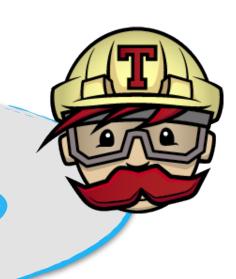
ruby gradle elasticsearch

100000 10000 1000 100 10 **#Pull Requests** #Developers #Commits

Initiate CI process



How are GitHub developers using CI?



Developers

1. Usage of the Travis-Cl service

not configured (17 / 223) configured but **not** using (93 / 223)

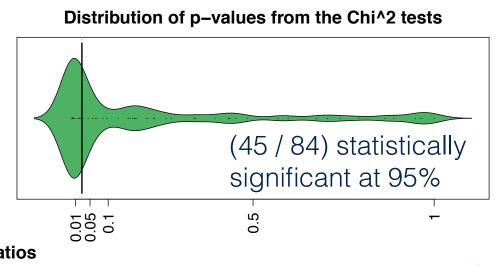
> configured and using (113 / 223)

60 tunos 40 -20 -Java Python Ruby

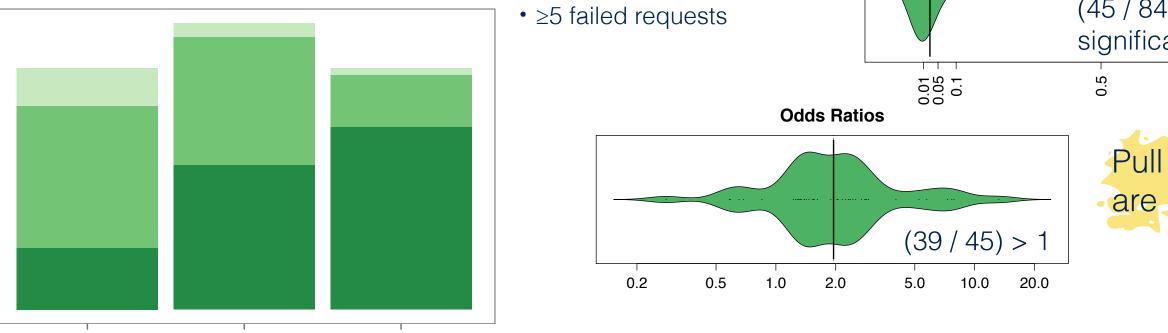
2. Commits vs. Pull Requests: Which builds succeed more often?

 χ^2 (84 / 113)

- ≥5 successful pull requests • ≥5 failed pull requests
- ≥5 successful commits



Pull request builds are more successful!



	Prog. language			Age (years)			Contributors		
	Java	Python	Ruby	< 2	2–4	>4	< 17	17—33	> 33
# projects	10	34	40	24	42	18	29	27	28
s.t. χ2 p < 0.05	3	19	23	9	25	11	18	, 15	12
reject Stouffer H0?	Х	1	√ ≥	X	✓	✓.	V	V	X

n/a 89 87 n/a 92 82 89 80 n/a

3. Not all projects are the same...

Pull request builds are more successful for:

- Python and Ruby
- Older than two years
- Not too many contributors

Report



Test

Build

% odds ratio > 1