

Overview of the studied projects

	Project	Lang.	Lifetime	Number of builds	Median team size	Median jobs/build	Median project size (LOC)	Breakage ratio%	Proportion of noise%
1	adhearsion/adhearsion	Ruby	2012 – 2016	1,394	5	5	3,987	74%	51%
2	apache/jackrabbit-oak	Java	2012 – 2016	8,183	8	1	109,827	42%	58%
3	apache/sling	Java	2015 – 2016	2,118	9	2	263,526	96%	58%
4	BuildCraft/BuildCraft	Java	2014 – 2016	2,054	16	1	64,048	49%	77%
5	celluloid/celluloid	Ruby	2012 – 2016	1,411	13	6	2,909	43%	56%
6	danielweinmann/catarse	Ruby	2011 – 2013	1,054	7	1	4,984.5	72%	64%
7	deeplearning4j/deeplearning4j	Java	2014 – 2016	2,789	14	1	41,422	90%	82%
8	diaspora/diaspora	Ruby	2011 – 2016	4,607	36	8	17,626	55%	29%
9	dreamhead/moco	Java	2013 – 2016	1,438	3	3	6,712	31%	72%
10	expertiza/expertiza	Ruby	2013 – 2016	1,779	11	1	27,952	59%	77%
11	facebook/buck	Java	2013 – 2016	1,568	47	1	192,057.5	62%	97%
12	facebook/presto	Java	2013 – 2015	2,153	20	1	149,663	51%	72%
13	fatfreecrm/fat_free_crm	Ruby	2011 – 2016	1,090	8	4	8,522	51%	34%
14	feedbin/feedbin	Ruby	2013 – 2016	1,148	3	1	7,722	32%	92%
15	fog/fog	Ruby	2012 – 2016	3,161	87	8	126,822	34%	68%
16	geoserver/geoserver	Java	2013 – 2016	2,994	52	2	306,249.5	54%	42%
17	ging/social_stream	Ruby	2011 – 2015	2,181	6	4	7,466	31%	58%
18	grails/grails-core	Java	2014 – 2016	2,207	15	1	63,024	31%	49%
19	HubSpot/Singularity	Java	2016 – 2016	3,871	12	3	36,584	49%	48%
20	inaturalist/inaturalist	Ruby	2013 – 2016	1,156	9	2	50,891	33%	57%
21	jnicklas/capybara	Ruby	2011 – 2016	1,015	12	8	6,660	48%	43%
22	jRuby/jRuby	Ruby	2012 – 2016	12,056	39	28	155,720.5	59%	40%
23	killbill/killbill	Java	2012 – 2016	2,756	4	3	61,986	59%	69%
24	l0rdn1kk0n/wicket-bootstrap	Java	2013 – 2016	1,167	9	1	12,608	52%	52%
25	locomotivecms/engine	Ruby	2011 – 2016	1,085	9	1	10,066	45%	71%
26	MarkUsProject/Markus	Ruby	2014 – 2016	1,268	14	1	20,413	57%	74%
27	mbj/mutant	Ruby	2012 – 2015	1,411	8	4	3,408	55%	50%
28	middleman/middleman	Ruby	2011 – 2016	1,762	13	5	6,063	34%	44%
29	nanoc/nanoc	Ruby	2013 – 2016	1,298	6	5	6,970	33%	52%
30	neo4jrb/neo4j	Ruby	2011 – 2016	2,604	11	6	3,934	33%	36%
31	neo4jrb/neo4j-core	Ruby	2012 – 2016	1,394	7	3	3,053	34%	38%
32	nutzam/nutz	Java	2012 – 2016	1,289	8	4	48,906	45%	22%
33	openfoodfoundation/openfoodnetwork	Ruby	2013 – 2016	2,186	16	1	26,370	64%	77%
34	opf/openproject	Ruby	2013 – 2015	7,088	47	8	53,421.5	35%	32%
35	orbeon/orbeon-forms	Java	2012 – 2016	3,040	2	1	55,523	53%	81%
36	psu-stewardship/scholarsphere	Ruby	2013 – 2016	1,237	12	3	3,044	31%	60%
37	puma/puma	Ruby	2012 – 2016	1,092	6	7	3,449	56%	74%
38	rails/rails	Ruby	2011 – 2016	19,342	221	24	53,513.5	34%	49%
39	refinery/refinerycms	Ruby	2012 – 2016	1,682	22	12	6,975	35%	49%
40	restlet/restlet-framework-Java	Java	2013 – 2016	1,135	8	1	128,523	47%	65%

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41	rubinius/rubinius	Ruby	2011 – 2016	4,601	42	2	279,787	33%	40%
42	Ruby-concurrency/concurrent-Ruby	Ruby	2013 – 2016	1,153	10	7	5,046	41%	42%
43	sanity/quickml	Java	2013 – 2016	1,029	8	1	5,344	31%	47%
44	sferik/rails_admin	Ruby	2011 – 2016	1,368	24	15	4,641	43%	38%
45	spree/spree	Ruby	2011 – 2016	2,960	50	6	12,374	64%	48%
46	square/okhttp	Java	2012 – 2016	3,609	18	2	14,063	41%	59%
47	structr/structr	Java	2012 – 2015	2,098	9	1	46,770	48%	38%
48	sunlightlabs/scout	Ruby	2012 – 2016	1,104	1	1	5,212.5	58%	80%
49	Unidata/thredds	Java	2013 – 2016	2,615	12	3	427,572	58%	47%
50	activeadmin/activeadmin	Ruby	2011 – 2016	1,957	19	4	6,360	20%	61%
51	asciidoctor/asciidoctor	Ruby	2013 – 2016	1,397	5	7	8,930	9%	61%
52	asm-helpful/helpful-web	Ruby	2013 – 2015	1,109	26	1	2,917	26%	42%
53	AzureAD/azure-activedirectory-library-for-android	Java	2014 – 2016	1,424	12	1	7,876	30%	59%
54	bikeindex/bike_index	Ruby	2013 – 2016	1,630	3	1	9,923	9%	38%
55	brettwooldridge/HikariCP	Java	2013 – 2015	1,600	8	1	3,695	10%	21%
56	caelum/vraptor4	Java	2013 – 2015	2,281	24	1	11,214	12%	51%
57	cantino/huginn	Ruby	2013 – 2015	1,298	17	3	7,969.5	13%	60%
58	checkstyle/checkstyle	Java	2013 – 2015	1,507	17	4	28,999	7%	50%
59	chef/chef	Ruby	2013 – 2015	2,175	33	5	48,494	19%	67%
60	cloudfoundry/cloud_controller_ng	Ruby	2013 – 2015	2,746	72	3	13,250	25%	26%
61	cloudfoundry/uaa	Java	2013 – 2015	1,208	18	4	15,604	11%	54%
62	CloudifySource/cloudify	Java	2012 – 2014	5,727	17	1	50,896	25%	74%
63	concerto/concerto	Ruby	2011 – 2016	2,483	18	3	5,235	15%	45%
64	datastax/Java-driver	Java	2015 – 2016	1,253	12	3	26,612	29%	86%
65	dita-ot/dita-ot	Java	2012 – 2016	1,624	4	1	24,024	11%	60%
66	dropwizard/dropwizard	Java	2013 – 2016	1,536	30	2	12,159	8%	38%
67	DSpace/DSpace	Java	2013 – 2016	2,142	33	1	210,643	9%	80%
68	embulk/embulk	Java	2015 – 2016	1,020	6	1	10,606	8%	55%
69	enspiral/loomio	Ruby	2012 – 2013	579	11	1	5,860	53%	99%
70	errbit/errbit	Ruby	2011 – 2016	1,134	12	4	3,240	14%	46%
71	eXist-db/exist	Java	2013 – 2016	1,060	13	2	350,683	27%	87%
72	FasterXML/jackson-databind	Java	2014 – 2016	1,471	6	2	51,359	28%	71%
73	FenixEdu/fenixedu-academic	Java	2013 – 2016	2,839	17	1	482,397	3%	69%
74	fluent/fluentd	Ruby	2013 – 2016	1,151	13	10	9,740	11%	31%
75	gavinlaking/vedeu	Ruby	2014 – 2016	1,715	3	1	18,305	9%	42%
76	go-lang-plugin-org/go-lang-idea-plugin	Java	2014 – 2015	1,361	11	1	34,343	12%	55%
77	gradle/gradle	Java	2014 – 2016	4,019	39	1	165,127	9%	42%
78	graphhopper/graphhopper	Java	2012 – 2016	1,476	8	3	27,398	8%	26%
79	Graylog2/graylog2-server	Java	2012 – 2016	5,195	12	2	60,007	10%	44%
80	Growstuff/growstuff	Ruby	2012 – 2016	1,275	15	1	33,328	11%	39%

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81	grpc/grpc-Java	Java	2015 – 2016	1,204	17	2	35,596	11%	46%
82	guard/guard	Ruby	2011 – 2016	1,155	12	5	2,434	28%	43%
83	heroku/heroku	Ruby	2011 – 2016	3,000	34	4	6,257	20%	53%
84	Homebrew/homebrew-science	Ruby	2015 – 2016	1,214	45	2	21,394.5	29%	46%
85	iluwatar/Java-design-patterns	Java	2014 – 2016	1,049	9	1	8,657	4%	57%
86	Javaslang/Javaslang	Java	2014 – 2016	1,674	4	1	10,003	6%	47%
87	jMonkeyEngine/jmonkeyengine	Java	2014 – 2016	1,220	9	1	207,810.5	18%	70%
88	jOOQ/jOOQ	Java	2013 – 2016	1,527	4	3	99,395	24%	61%
89	jphp-compiler/jphp	Java	2013 – 2016	1,025	5	4	61,380	22%	47%
90	kmuto/review	Ruby	2011 – 2016	1,085	8	4	9,430	12%	37%
91	languagetool-org/languagetool	Java	2014 – 2016	1,911	16	1	49,110	10%	77%
92	leereilly/swot	Ruby	2013 – 2016	1,026	69	2	218	24%	65%
93	loomio/loomio	Ruby	2015 – 2016	3,060	14	1	19,956.5	27%	45%
94	maxcom/lorsource	Java	2012 – 2016	1,980	5	2	23,593	7%	53%
95	mikera/vectorz	Java	2012 – 2016	1,137	4	3	33,161	5%	56%
96	mitchellh/vagrant	Ruby	2012 – 2016	4,382	51	1	26,033	9%	58%
97	mozilla/MozStumbler	Java	2013 – 2016	1,873	21	1	5,660	6%	58%
98	mperham/sidekiq	Ruby	2012 – 2016	2,110	19	5	2,891	22%	45%
99	naver/pinpoint	Java	2015 – 2016	1,533	18	2	97,973	13%	87%
100	opal/opal	Ruby	2012 – 2016	2,992	16	5	19,848	10%	44%
101	openaustralia/morph	Ruby	2014 – 2016	1,595	8	1	4,637	6%	63%
102	openMF/mifosx	Java	2013 – 2016	2,950	28	1	86,708	7%	79%
103	openshift/rhc	Ruby	2012 – 2016	1,397	15	3	9,658	13%	76%
104	openSUSE/open-build-service	Ruby	2012 – 2016	4,642	20	3	29,072	29%	84%
105	owlcs/owlapi	Java	2013 – 2016	1,289	6	3	125,171	15%	36%
106	owncloud/android	Java	2014 – 2016	4,449	21	1	24,228	16%	73%
107	padrino/padrino-framework	Ruby	2011 – 2016	1,790	20	7	7,700	29%	51%
108	pagseguro/Ruby	Ruby	2013 – 2016	347	10	5	1,174	18%	81%
109	perfectsense/brightspot-cms	Java	2015 – 2016	3,111	25	1	39,123	10%	37%
110	plataformatec/devise	Ruby	2011 – 2016	1,343	22	8	3,239	20%	67%
111	presidentbeef/brakeman	Ruby	2011 – 2016	1,137	8	3	11,923	7%	43%
112	progit/progit	Ruby	2012 – 2016	1,021	31	1	24	8%	81%
113	projectblacklight/blacklight	Ruby	2012 – 2016	1,998	13	6	6,233	17%	63%
114	projecthydra/sufia	Ruby	2013 – 2016	3,758	35	2	6,632	13%	38%
115	pry/pry	Ruby	2011 – 2016	1,635	20	8	6,821	26%	56%
116	puniverse/quasar	Java	2013 – 2016	1,481	5	2	41,574	19%	34%
117	puppetlabs/facter	Ruby	2013 – 2016	1,357	46	4	5,631	4%	60%
118	puppetlabs/puppet	Ruby	2012 – 2016	3,223	93	4	85,255	7%	53%
119	querydsl/querydsl	Java	2014 – 2018	2,828	10	2	48,254	25%	41%
120	rackerlabs/blueflood	Java	2013 – 2016	1,361	26	2	16,567	18%	24%

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121	rails-api/active_model_serializers	Ruby	2012 – 2016	1,208	38	23	804	13%	61%
122	rapid7/metasploit-framework	Ruby	2012 – 2016	8,833	92	3	599,234	8%	51%
123	ReactiveX/RxJava	Java	2014 – 2016	1,601	14	1	23,335	8%	34%
124	rollbar/rollbar-gem	Ruby	2013 – 2016	1,204	10	36	1,939	22%	41%
125	RS485/LogisticsPipes	Java	2013 – 2016	1,179	8	3	62,789	29%	68%
126	rspec/rspec-core	Ruby	2011 – 2016	2,853	22	10	5,123	19%	42%
127	rspec/rspec-expectations	Ruby	2011 – 2016	1,411	19	11	3,074	17%	52%
128	rspec/rspec-mocks	Ruby	2011 – 2016	1,787	16	10	3,014	16%	49%
129	rspec/rspec-rails	Ruby	2011 – 2016	1,308	19	28	1,899	29%	38%
130	Ruby/Ruby	Ruby	2011 – 2016	15,373	22	2	428,696	22%	70%
131	Rubygems/Rubygems	Ruby	2011 – 2016	2,440	32	8	17,059	24%	52%
132	rundeck/rundeck	Java	2012 – 2016	1,475	9	2	38,168	15%	34%
133	sensu/sensu	Ruby	2012 – 2016	1,098	8	5	2,593	12%	27%
134	sensu/sensu-community-plugins	Ruby	2013 – 2016	1,653	35	1	15,016	14%	50%
135	shoes/shoes4	Ruby	2012 – 2016	2,109	16	6	12,073	10%	37%
136	Shopify/liquid	Ruby	2011 – 2016	1,066	24	6	2,336	17%	63%
137	SonarSource/sonarqube	Java	2015 – 2016	4,689	23	7	155,385	25%	50%
138	SpongePowered/SpongeAPI	Java	2014 – 2016	1,883	45	2	26,008	12%	45%
139	square/retrofit	Java	2012 – 2016	1,299	17	1	3,250	6%	70%
140	square/wire	Java	2013 – 2016	1,368	13	2	6,492	6%	37%
141	sul-dlss/spotlight	Ruby	2013 – 2015	1,620	10	3	2,874	15%	55%
142	tananaev/traccar	Java	2015 – 2016	1,785	5	1	18,202	3%	16%
143	tdiary/tdiary-core	Ruby	2011 – 2016	1,240	8	12	17,396	26%	61%
144	test-kitchen/test-kitchen	Ruby	2013 – 2016	1,214	23	7	3,562	15%	43%
145	thoughtbot/hound	Ruby	2014 – 2015	1,096	38	1	2,476	27%	73%
146	thoughtbot/suspenders	Ruby	2011 – 2016	1,060	36	1	655	26%	78%
147	timmolter/XChange	Java	2013 – 2016	1,525	27	1	48,853	12%	16%
148	travis-ci/travis-cookbooks	Ruby	2013 – 2016	2,241	20	1	9,270	6%	54%
149	travis-ci/travis-core	Ruby	2011 – 2016	3,210	20	4	10,676	23%	50%
150	troessner/reek	Ruby	2012 – 2016	1,276	13	7	3,188	5%	55%
151	weld/core	Java	2014 – 2016	1,235	8	1	53,690	8%	82%
152	yegor256/rultor	Java	2014 – 2016	1,745	7	1	5,433	27%	80%
153	zendesk/samson	Ruby	2014 – 2016	2,101	36	5	8,792	18%	47%