



October 7, 2016



	Accuracy
System	Merge Commit
linux	6.9%
mono	1.9%
rails	17.7%
homebrew	0.0%
mongo	8.6%
git	22.6%
gimp	0.1%
swift	4.5%
django	1.8%
gitlabhq	29.8%
docker	38.4%
meteor	6.4%
ansible	25.2%
three.js	17.3%
bootstrap	25.7%
foundation	25.7%
node	3.6%
angular.js	0.3%
libgit2	21.5%
react	27.9%
jeekyll	20.2%
jquery	3.1%
express	9.0%
Rocket.Chat	27.4%
vscode	7.1%
d3	17.1%
oh-my-zsh	36.0%
backbone	26.4%
AFNetworking	24.0%
moment	24.7%
nw.js	16.3%
gitignore	39.9%
reveal.js	14.9%
Faker	27.2%
html5-boilerplate	11.2%
infer	0.5%
Font-Awesome	10.5%
jQuery-File-Upload	8.4%
roboto	12.0%
pdfmake	14.5%

Branch Head
6.9%
2.1%
17.7%
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22.6%
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17.3%
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27.6%
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18.0%
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Merge Parents
14.0%
5.3%
42.2%
0.1%
21.2%
43.8%
0.4%
10.8%
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61.1%
77.3%
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79.9%
37.7%
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30.4%
1.6%
28.0%
23.8%
26.9%
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Ancestral
70.1%
16.0%
64.4%
5.1%
42.5%
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17.6%
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91.6%
93.3%
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79.7%
71.9%
82.0%
78.1%
45.6%
27.0%
89.1%
84.5%
87.4%
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87.3%
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81.1%
94.0%
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83.9%
60.1%
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58.2%
92.8%
48.3%
94.3%
52.0%
27.6%
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Majority Origin
98.1%
67.7%
90.3%
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90.1%
99.8%
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100.0%
96.3%
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(80-100%]

	Accuracy				
System	Merge Commit	Branch Head	Merge Parents	Ancestral	Majority Origin
linux	6.9%	6.9%	14.0%	70.1%	98.1%
mono	1.9%	2.1%	5.3%	16.0%	67.7%
rails	17.7%	17.7%	42.2%	64.4%	90.3%
homebrew	0.0%	0.0%	0.1%	5.1%	100.0%
mongo	8.6%	8.6%	21.2%	42.5%	90.1%
git	22.6%	22.6%	43.8%	72.9%	99.8%
gimp	0.1%	0.2%	0.4%	23.3%	100.0%
swift	4.5%	4.6%	10.8%	17.6%	100.0%
django	1.8%	1.9%	5.1%	36.9%	96.3%
gitlabhq	29.8%	29.9%	61.1%	91.6%	99.9%
docker	38.4%	38.4%	77.3%	93.3%	99.7%
meteor	6.4%	8.2%	18.1%	58.7%	99.5%
ansible	25.2%	25.4%	59.3%	79.7%	100.0%
three.js	17.3%	17.3%	43.2%	71.9%	98.6%
bootstrap	25.7%	25.9%	60.9%	82.0%	100.0%
foundation	25.7%	25.8%	59.9%	78.1%	99.2%
node	3.6%	4.8%	10.5%	45.6%	100.0%
angular.js	0.3%	0.4%	0.9%	27.0%	99.7%
libgit2	21.5%	22.5%	48.0%	89.1%	99.9%
react	27.9%	28.1%	61.3%	84.5%	100.0%
jeekyll	20.2%	20.5%	57.6%	87.4%	99.4%
jquery	3.1%	3.2%	7.9%	16.9%	61.1%
express	9.0%	9.2%	23.1%	40.6%	99.7%
Rocket.Chat	27.4%	27.6%	61.3%	87.3%	99.9%
vscode	7.1%	7.5%	19.4%	59.6%	100.0%
d3	17.1%	18.0%	39.5%	81.1%	100.0%
oh-my-zsh	36.0%	36.0%	72.0%	94.0%	99.3%
backbone	26.4%	26.6%	62.4%	79.8%	99.4%
AFNetworking	24.0%	24.2%	56.3%	77.3%	100.0%
moment	24.7%	24.7%	54.3%	83.9%	99.1%
nw.js	16.3%	17.0%	41.1%	60.1%	100.0%
gitignore	39.9%	40.1%	79.9%	92.8%	99.6%
reveal.js	14.9%	15.2%	37.7%	58.2%	95.7%
Faker	27.2%	27.5%	59.3%	92.8%	100.0%
html5-boilerplate	11.2%	12.3%	30.4%	48.3%	98.6%
infer	0.5%	0.7%	1.6%	94.3%	100.0%
Font-Awesome	10.5%	11.5%	28.0%	52.0%	97.9%
jQuery-File-Upload	8.4%	8.7%	23.8%	27.6%	100.0%
roboto	12.0%	12.4%	26.9%	50.8%	100.0%
pdfmake	14.5%	15.0%	34.2%	58.2%	100.0%

[0-30%]  
(30-50%)  
(50-80%)  
(80-100%)

# Manual Verification

Two subjects (S1, S2) look at 400 commits from *react*

TABLE 7. MANUAL VERIFICATION REVEALS A HIGH TOOL PRECISION AND AGREEMENT BETWEEN SUBJECTS, WHERE S1 AND S2 ARE THE HUMAN SUBJECTS AND T IS THE TOOL IMPLEMENTING THE ALGORITHM.

Subject Agreement	Occurrences	Percentage of Selection
$S1 \cap T$	316	79%
$S2 \cap T$	313	78%
$S1 \cap S2$	395	99%
$S1 \cap S2 \cap T$	312	78%
$(S1 \cap T) \cup (S2 \cap T)$	319	80%