

Hong Kong JS

We're 10.0!

A yellow square with the letters 'JS' in black, positioned in the bottom right corner of the square.

JS

Agenda

- Housekeeping
- Announcements
- JavaScript in 2016, Kevin Bluer
- JavaScript and IoT, Eric Yu and Edward Lam
- Q&A

Housekeeping

- Restrooms
- Drinks



Announcements

- Slack (slack.hongkongjs.com)
- Upcoming => React
- Interested in speaking (kevin@bluer.com)?

JavaScript in 2016

Kevin Bluer





Agenda

Agenda

- Session Goals
- Poll Results
- Statistics
- JavaScript's (ever increasing) Uses
- Trends
- Robots :)
- Summary

JavaScript in 2016



Is that a good thing?



JS



Session Goals

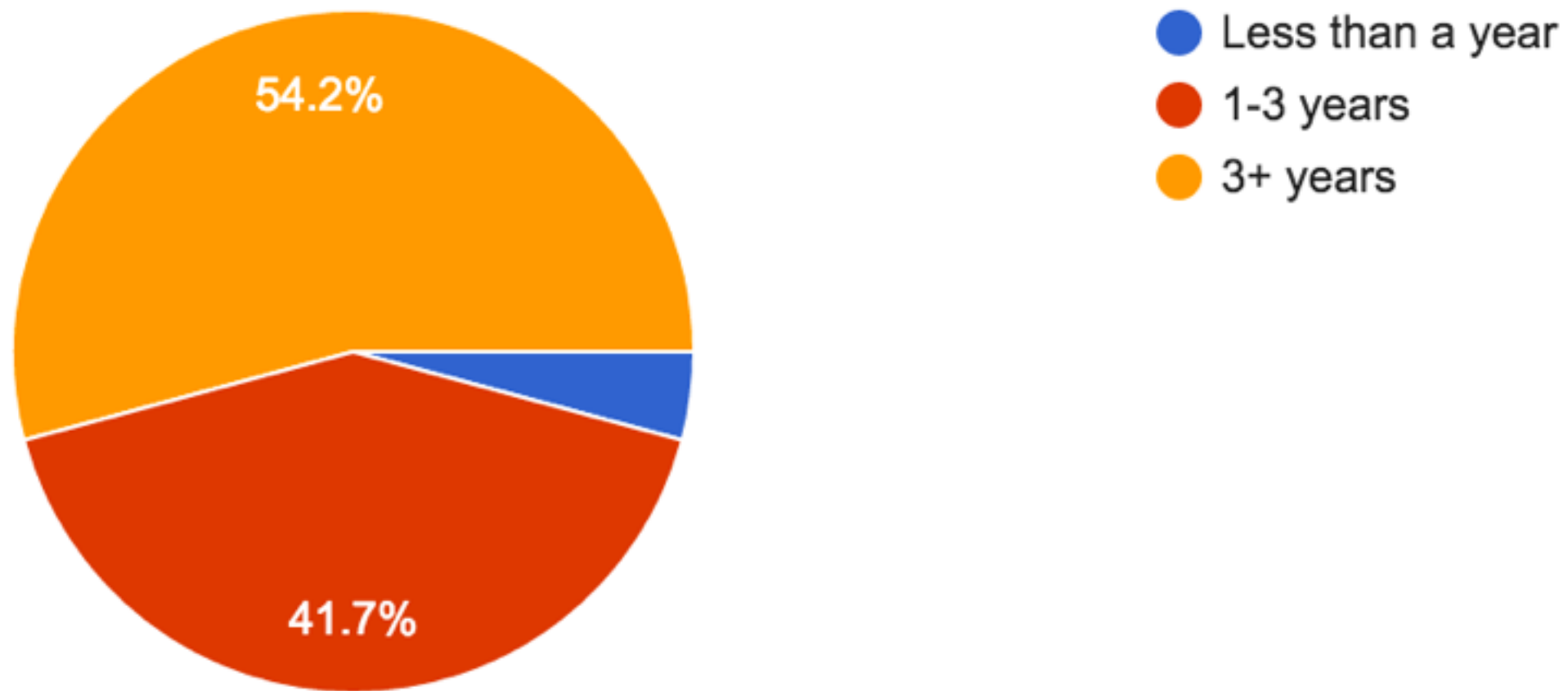
Session Goals

- To review the current state of JavaScript (and its associated uses, frameworks, utilities, etc)
- Highlight things you should be keeping an eye on
- Techniques for how to keep track (hint: it's not easy)
- Alleviate JavaScript “Tooling Anxiety” :)

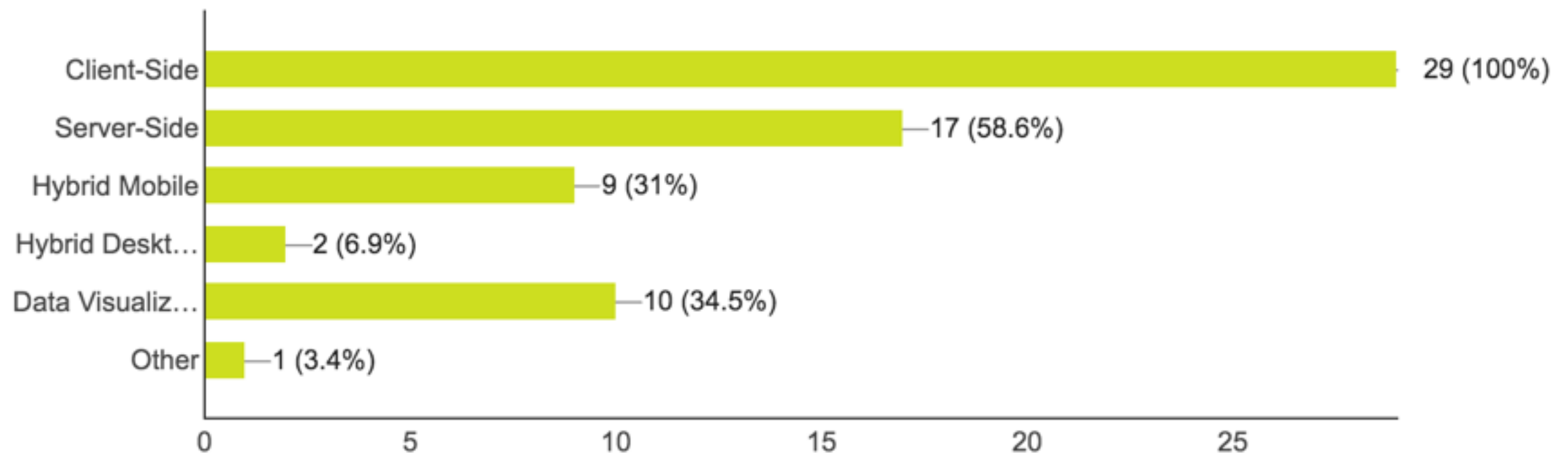


Poll Results

1. Years of experience with JS?



2. Where do you use JavaScript?



3. Current Framework(s)

● Angular

● jQuery

● React

● Meteor

● D3

● Ionic

● Vue

4. Next Framework(s)

- React

- D3

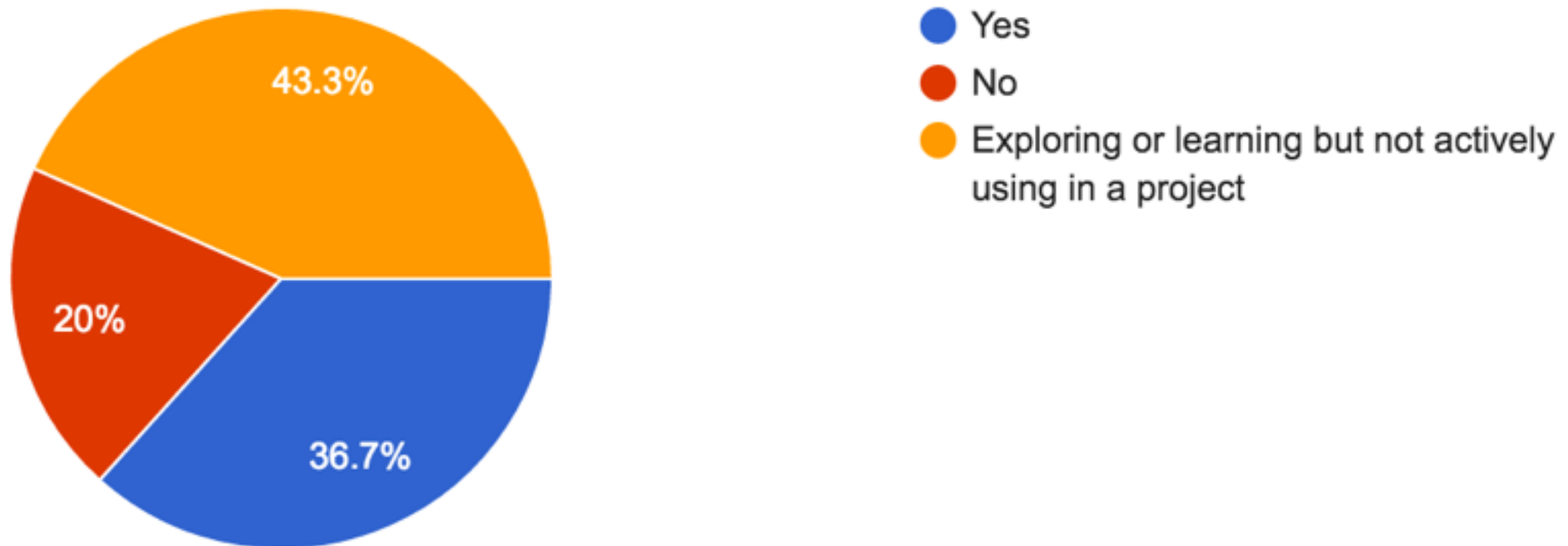
- Meteor

- Angular

- CycleJS

- Redux

5. Using ES6 / ES2015





Some Stats

JavaScript's Journey

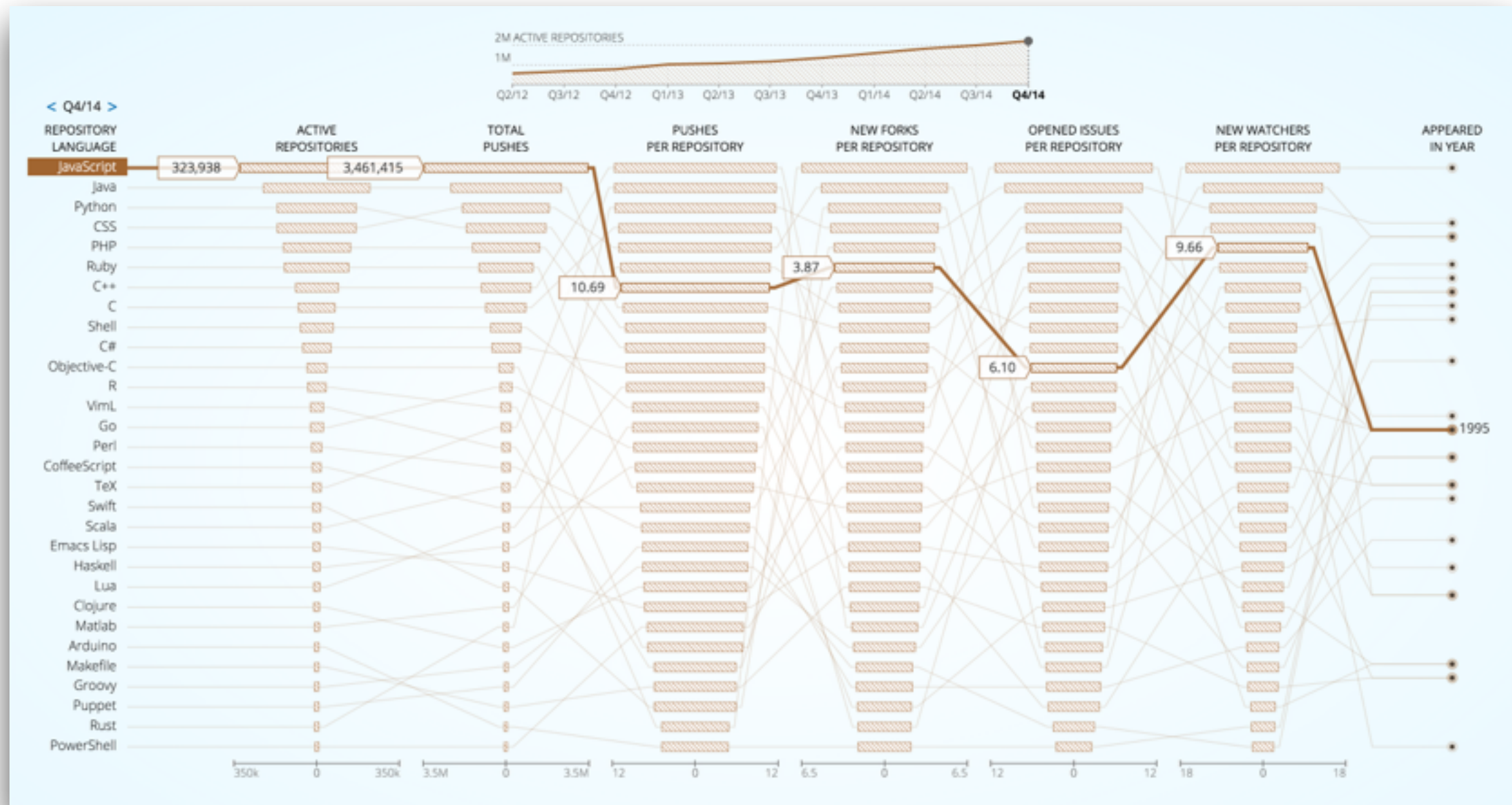
- JavaScript is now ~21 years old...
- Allegedly created in 10 days by Brendan Eich
- ECMAScript 6/2015 is the latest and greatest (with the ECMAScript 7/2016 specification begin released this year, and on a subsequent yearly schedule)
- *"JavaScript is the most commonly used programming language on Earth. Even back-end developers are more likely to use it than any other language,"*

BABEL

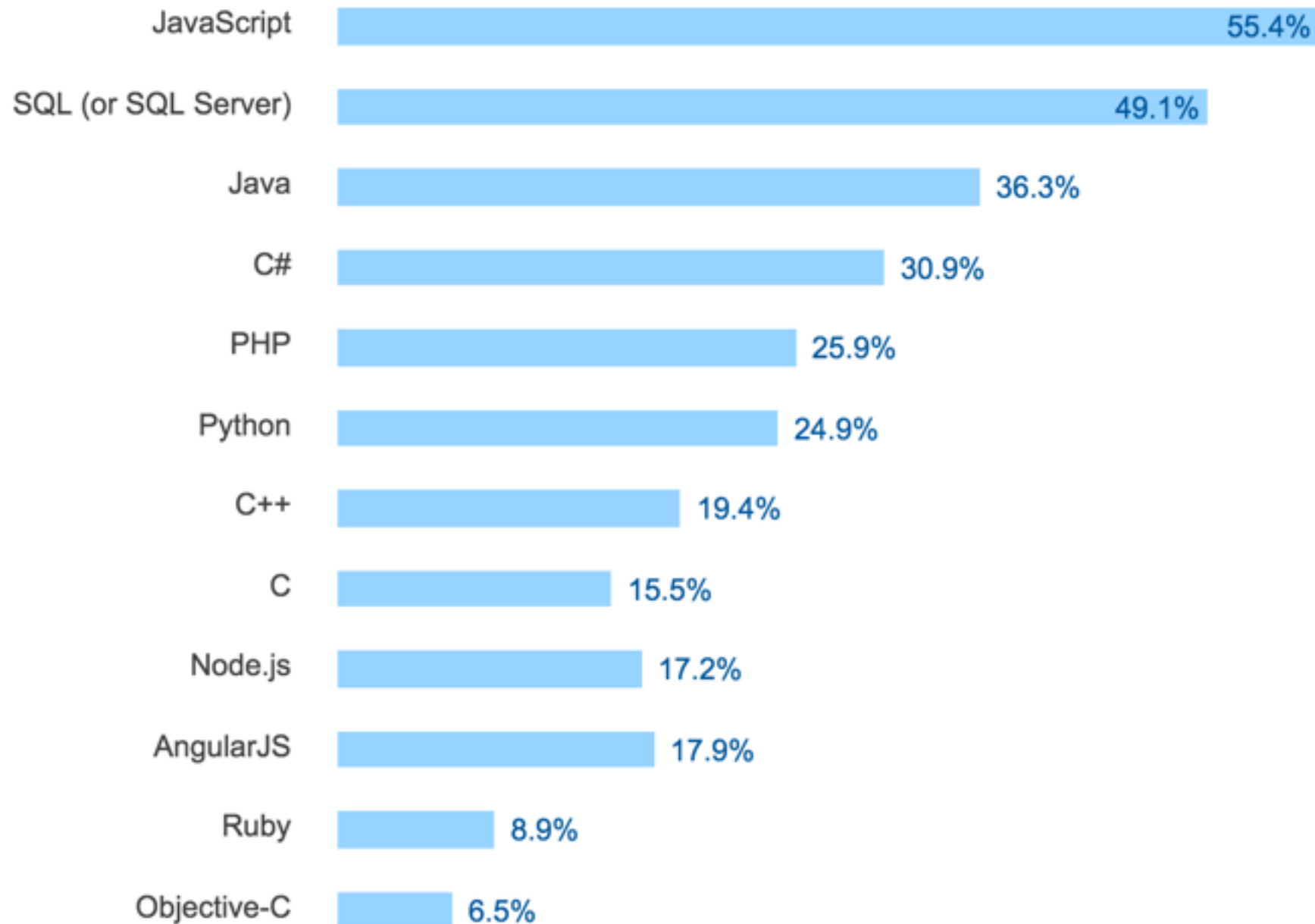


JavaScript vs...

Active Github Repos



Stack Overflow 2016



Stackshare



	Amazon EC2	GitHub	Slack
JavaScript	45.6%	50.5%	49.5%
Node.js	35.1%	36.3%	37.4%
jQuery	32.5%	33.3%	26.1%
Python	30.3%	24.9%	24.2%
AngularJS	23.8%	24%	22.1%
HTML5	23.5%	23%	22.9%
Java	22.2%	16.9%	12.8%
React	20.1%	19.7%	20.7%
Ruby	11.5%	14.4%	10.2%
Rails	8%	12.6%	8.3%
Django	9.8%	7.5%	10.6%
D3.js	9.7%	7.8%	5.4%
Handlebars.js	3.3%	2%	1.3%
Backbone.js	0%	-1.4%	-1.4%
.NET	-1.6%	-1.7%	-1.4%
Bootstrap	-1.5%	-4.2%	-5.1%
jQuery UI	-2.2%	-1.7%	-3.5%
Foundation	-1.8%	-2%	-2.2%
Underscore	-6.2%	-6.6%	-6.5%
PHP	-24.4%	-26.5%	-25.4%



JavaScript vs JavaScript

stats.js.org

RANK ♂	NAME	DAY	WEEK	MONTH
0000	FreeCodeCamp	36	217	1051
0001	angular.js	-2	5	25
0002	d3	2	10	46
0003	jquery	-2	-9	-17
0004	react	3	20	151
0005	html5-boilerplate	-1	-7	-30
0006	javascript	5	25	151
0007	reveal.js	-1	2	10
0008	react-native	5	30	118
0009	three.js	3	12	37
0010	meteor	0	3	14
0011	impress.js	-2	-7	-26
0012	frontend-nanodegree-resume	8	22	90
0013	todomvc	0	6	20
0014	jQuery-File-Upload	1	-3	-16
0015	backbone	-1	-6	-26
0016	brackets	-1	-5	-30
0017	You-Dont-Know-JS	4	18	102
0018	atom	2	9	52
0019	express	0	3	24
0020	socket.io	2	7	30



JavaScript's Uses

JavaScript's (ever increasing) Uses

- Client Side
- Server Side
- Visualization and Graphics
- Hybrid Mobile and Desktop
- CLI's
- General Utilities
- Internet of Things
- Robots



Trends Review

Trends Review

- Language
- Client Side
- Server Side
- Mobile and Desktop
- IDE's and Tooling
- Robots :)



PLEASE INTERRUPT ME



Language

Language

- ES6/2015 support improving
- Babel of course bringing it to the masses
- Now on a yearly specification release cycle
- CoffeeScript / TypeScript losing ground?
- More *Scripts: NativeScript, ThinScript, etc

What to Watch?

- Language evolution with the ECMAScript 7/2016 specification begin released this year, and on a subsequent yearly schedule (e.g. ECMAScript 8/2017 next year)

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Client Side

Client Side

- Experiencing FF (Framework Fatigue)?
- React and Angular 2.0 are *so hot right now* :)
- JavaScript swallowing everything (“Got a 93 (mobile) and 94 (desktop) on PageSpeed for the universally rendered webpack/react/redux/graphql app I just deployed. It literally has 0 html and 0 css, as in, it's all done in JS. ALL OF IT.”)
- PostCSS

What to Watch?

- React + Angular 2.0
- Progressive Web Applications
- TWBS4
- “Use a framework if you must but never presume it’s viable over the long-term. Newer and better alternatives will appear before you’re half-way through your project. Never forget frameworks are an option — *you don’t have to use one*. Smaller, nimbler projects with minimal dependencies are a safer bet.”



Server Side

Server Side

- Web Application: Express, Koa, Sails
- API: RESTify, HAPI, etc
- Real-time: Meteor
- Microservices
- Bundling out of control? MERN :)

What to Watch?

- Web Application

- Adonis (<http://www.adonisjs.com>)

- Trails (<http://trailsjs.io>)

- API

- Strapi (<http://strapi.io>)

- Nodal (<http://nodaljs.com>)

- Serverless BETA (<http://serverless.com>)

- Real-Time

- Meteor 1.3 (<https://www.meteor.com>) + Galaxy

- Feathers (<http://feathersjs.com>)



Mobile and Desktop

Mobile and Desktop

- The way in which (as well as the choices) you build mobile and desktop apps is rapidly evolving
- React Native
- Ionic Framework
- Electron (and equivalents)

What to Watch?

- Mobile

- NativeScript (<https://www.nativescript.org>)

- Reap (<http://reapp.io>)

- Ionic Framework (v2.0) (<http://ionic.io/2>)

- Desktop

- React Native for OS X (<https://github.com/ptmt/react-native-desktop>)



IDE's and Tooling

IDE's and Tooling

- *“Today you need Node.js, Gulp/Grunt, git, static HTML generators, Sass compilers, Autoprefixer, minifiers, uglifiers, linters, BrowserSync and a range of other build tools to create a basic “Hello World” page.”*
- IDE's
 - Sublime, Atom, WebStorm, Brackets
 - Nitrous, Cloud9
- Tooling / Utilities
 - Grunt 1.0, Gulp, Webpack
 - Modular CSS

What to Watch?

- IDE - WebStorm 2016.1
- CSS - PostCSS (<https://github.com/postcss>)
- Module Bundler - Webpack



Trend Summary

Trend Summary

- Don't get *too* distracted by trends
- Focus on your stack
- Relax :)











So...Robots?



JavaScript and Robots

JavaScript and Robots

- Yes, it's a thing :)
- A bigger / more mature than you might think...
 - Cylon.js (<https://cylonjs.com>)
 - Johnny-Five (<http://johnny-five.io>)
 - Nodebots (<http://nodebots.io>)

ARDrone	Arduino	Arduino YUN	Audio	Beaglebone Black
				
Bebop	BLE	Crazyflie	Digispark	Imp
				
Intel Galileo	Intel Edison	Intel IoT Analytics	Joystick	Keyboard
				
Leap Motion	M2X	MiP	MQTT	Nest
				
Neurosky	Octoblu	OpenCV	Particle	Pebble
				
Philips Hue	Pinoccio	PowerUp	Rapiro	Raspberry Pi

Good luck with that

Writing Device Drivers with JavaScript



O'REILLY®

David Flanagan

JS



Keep an eye on...

Keep an eye on...

- JavaScript Stats (<https://stats.js.org>)
- Github Trending (<https://github.com/trending>)
- NPM (<https://www.npmjs.com/browse/depended>)
- Githut (<http://githut.info>)
- Stackshare (<http://stackshare.io>)
- Yeoman (<http://yeoman.io/generators>)



Thank You :)



Appendix

Appendix

- <https://medium.com/javascript-and-opinions/state-of-the-art-javascript-in-2016-ab67fc68eb0b#.wnzytj9wl>
- <http://stackshare.io/posts/the-next-generation-of-software-stacks>
- <http://www.clock.co.uk/blog/javascript-frameworks-in-2016>
- <http://stackoverflow.com/research/developer-survey-2016>
- <http://codemix.com/blog/why-babel-matters>