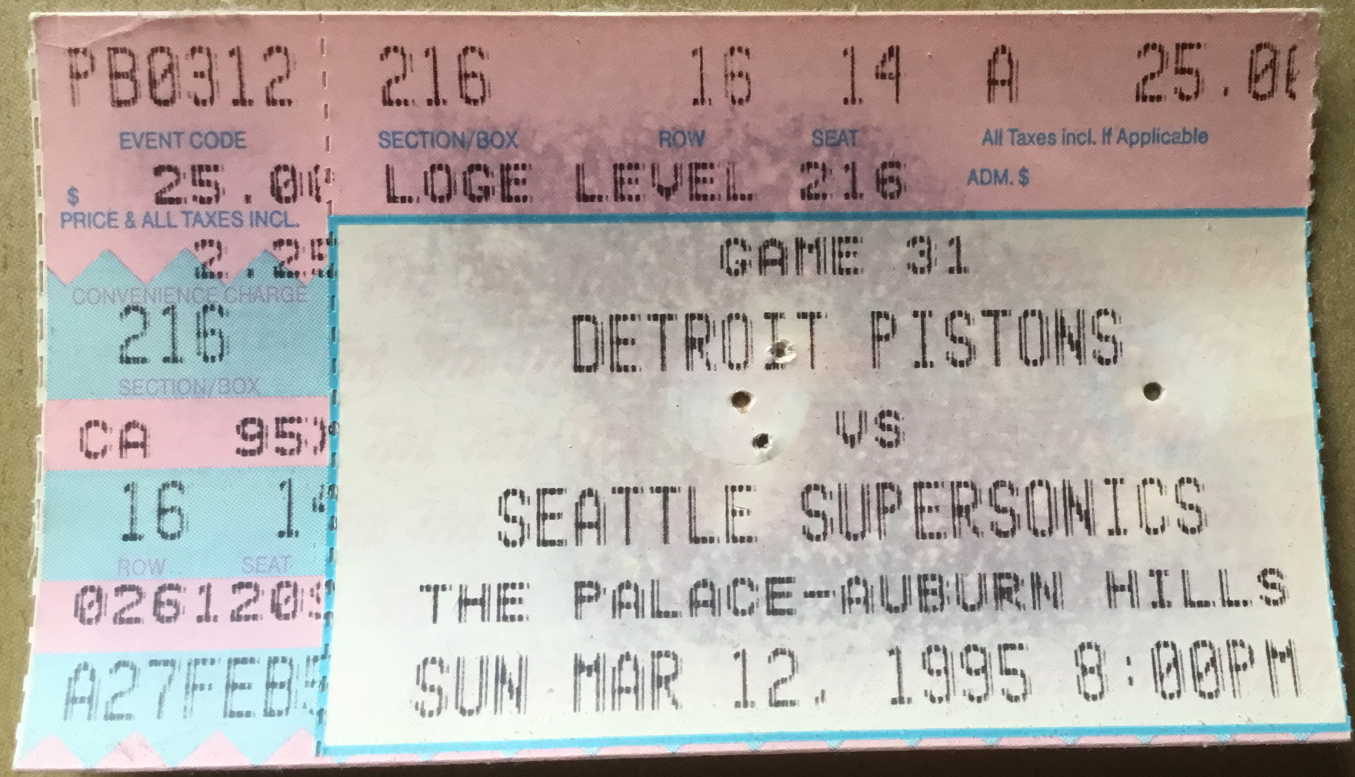
Why I Was Wrong About TypeScript

TJ VanToll

13-year-old me

Boom


PB0312 216 16 14 A 25.0
EVENT CODE SECTION/BOX ROW SEAT All Taxes Incl. If Applicable
$ 25.0 LOGE LEVEL 216 ADM. $
PRICE & ALL TAXES INCL.
2.25
CONVENIENCE CHARGE
216
SECTION/BOX
CA 95
16 1
ROW SEAT
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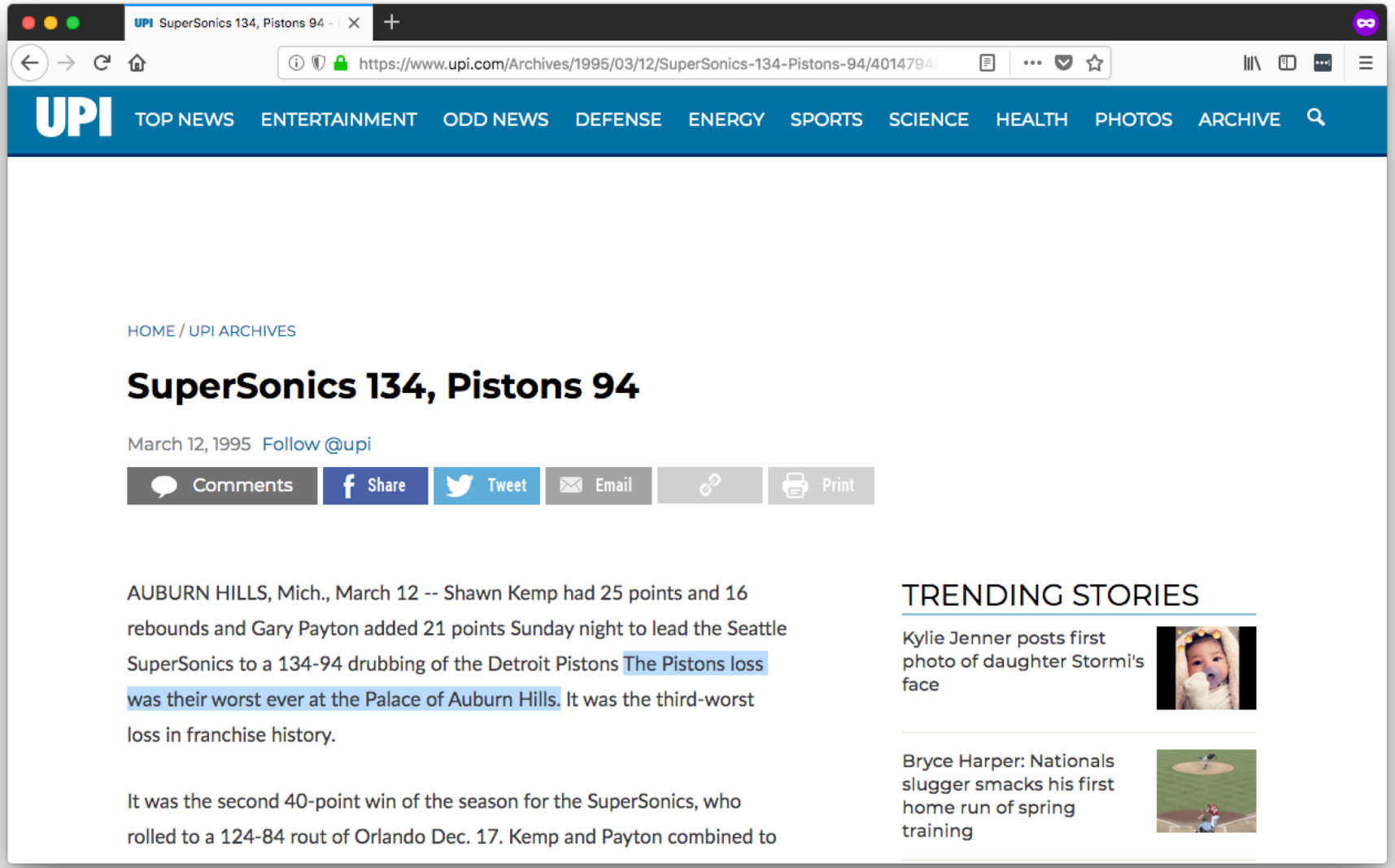
GAME 31
DETROIT PISTONS
VS
SEATTLE SUPERSONICS
THE PALACE-AUBURN HILLS
SUN MAR 12, 1995 8:00PM


UPI SuperSonics 134, Pistons 94 -
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SuperSonics 134, Pistons 94
March 12, 1995 Follow @upi
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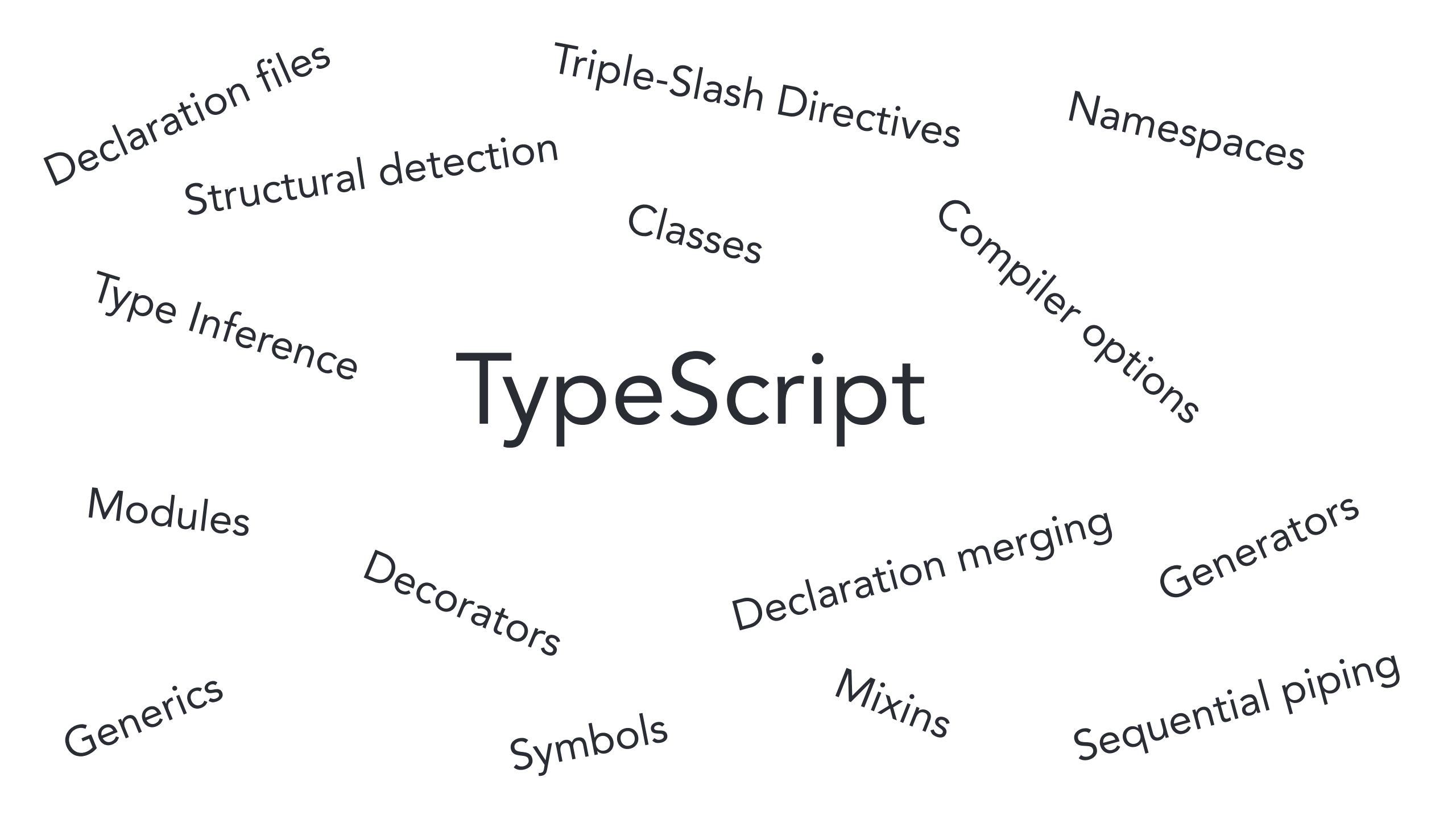
AUBURN HILLS, Mich., March 12 -- Shawn Kemp had 25 points and 16 rebounds and Gary Payton added 21 points Sunday night to lead the Seattle SuperSonics to a 134-94 drubbing of the Detroit Pistons The Pistons loss was their worst ever at the Palace of Auburn Hills. It was the third-worst loss in franchise history.
It was the second 40-point win of the season for the SuperSonics, who rolled to a 124-84 rout of Orlando Dec. 17. Kemp and Payton combined to
TRENDING STORIES
Kylie Jenner posts first photo of daughter Stormi's face
Bryce Harper: Nationals slugger smacks his first home run of spring training

TypeScript


Declaration files
Triple-Slash Directives
Namespaces
Structural detection
Classes
Compiler options
Type Inference
TypeScript
Modules
Decorators
Declaration merging
Generators
Generics
Symbols
Mixins
Sequential piping

Declaration files

Triple-Slash Directives

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Generators

Generics

Symbols

Mixins

Sequential piping

Why I Was Wrong About TypeScript

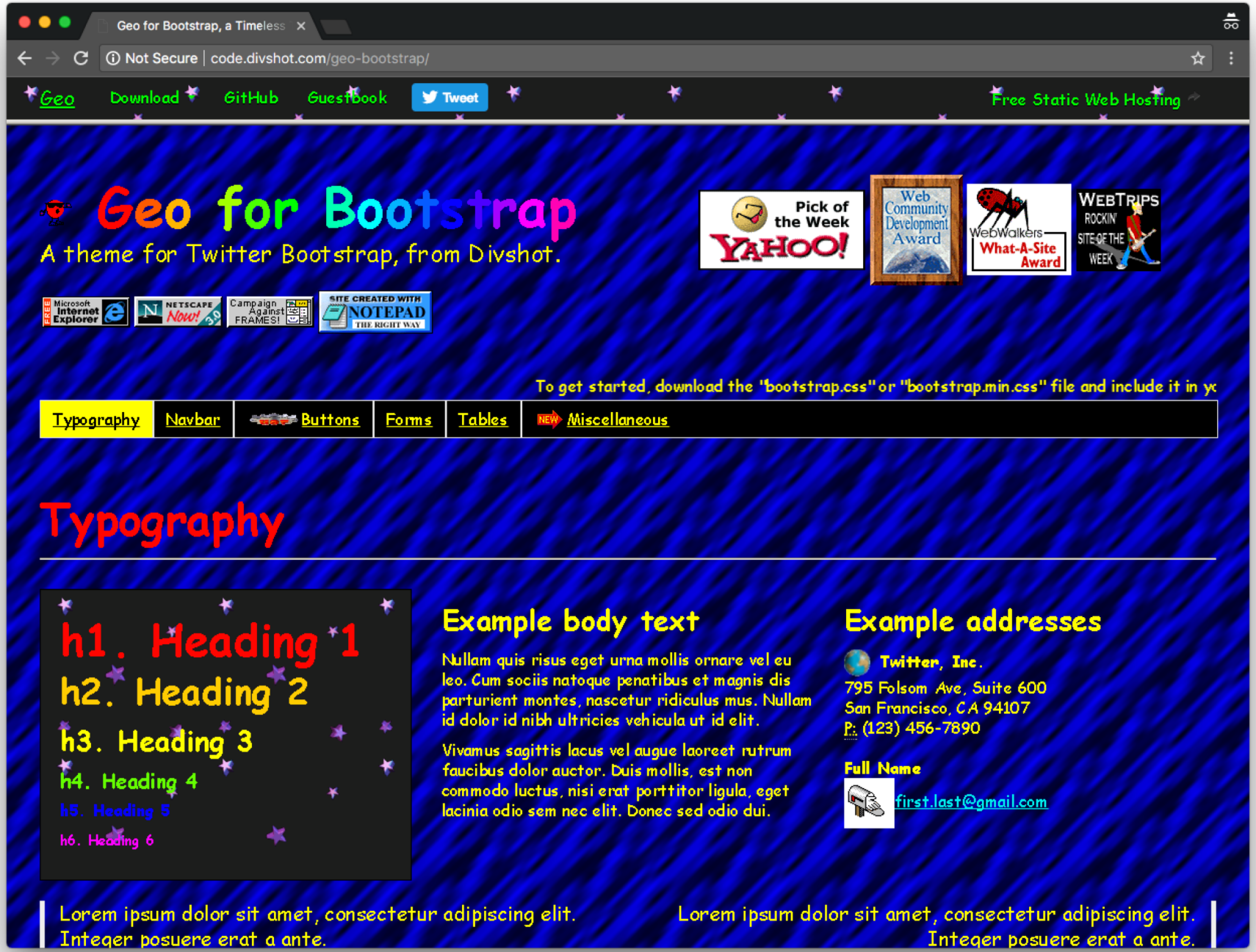
Whether TypeScript is a good fit for your next project

Why I Was Wrong About TypeScript

"A typed superset of JavaScript that compiles to plain JavaScript"

"A typed superset of JavaScript that **compiles to** plain **JavaScript**"

World Wide Web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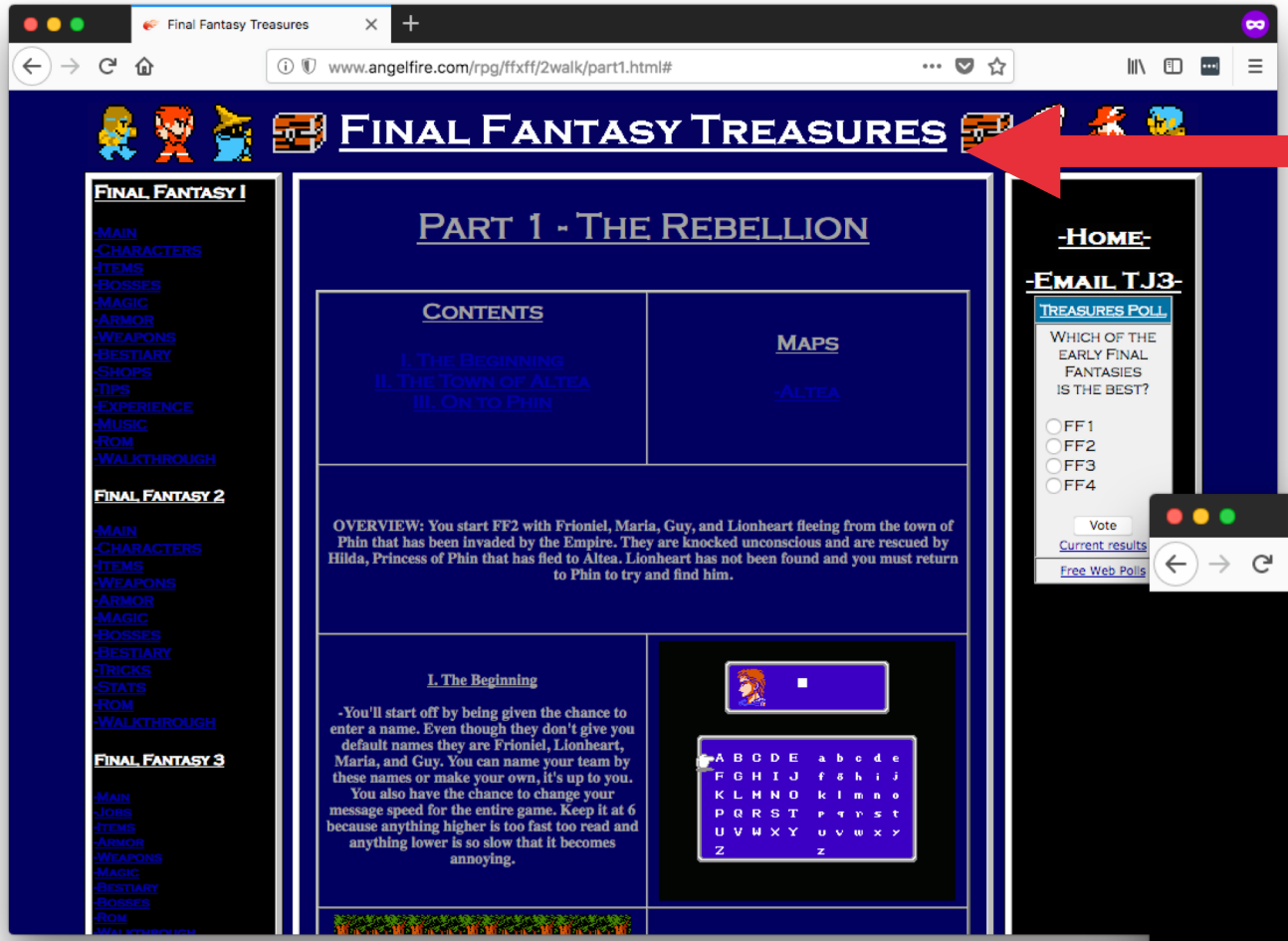
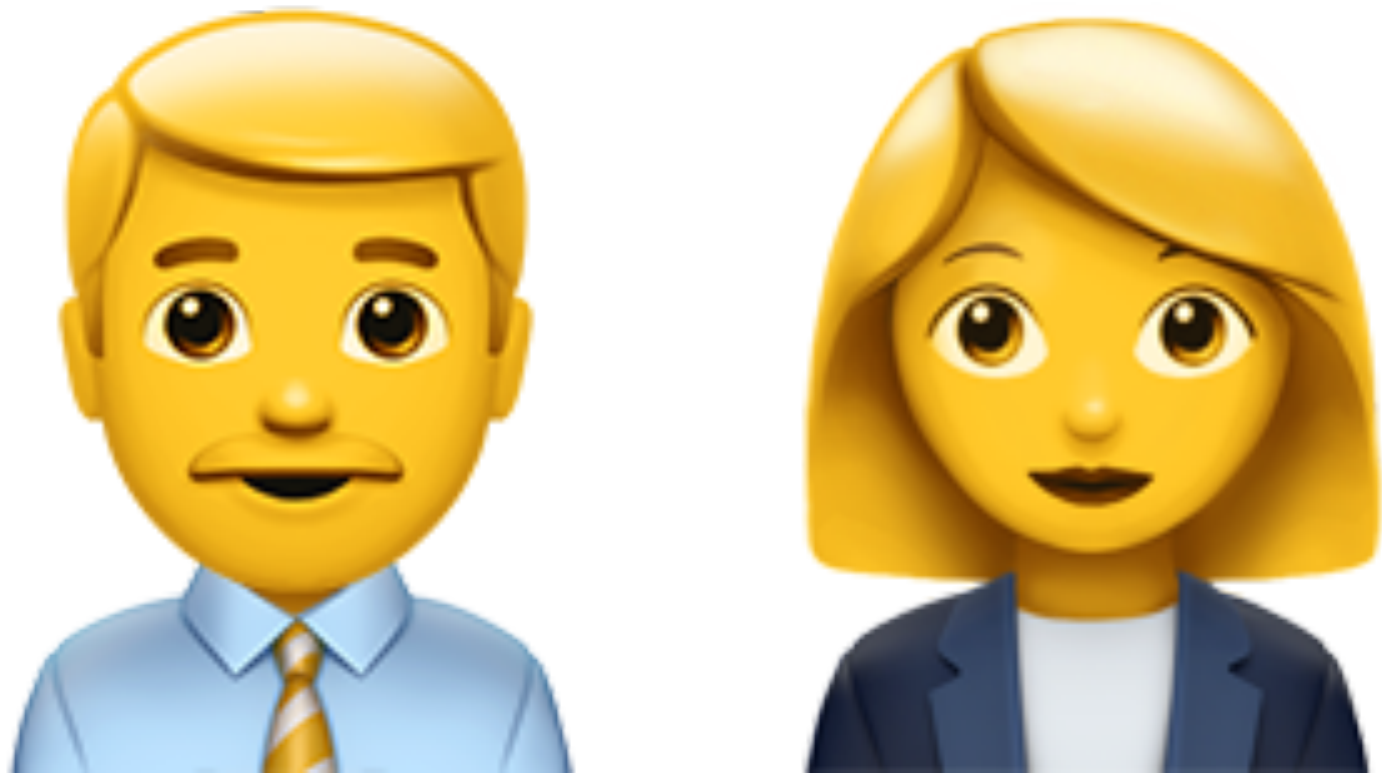
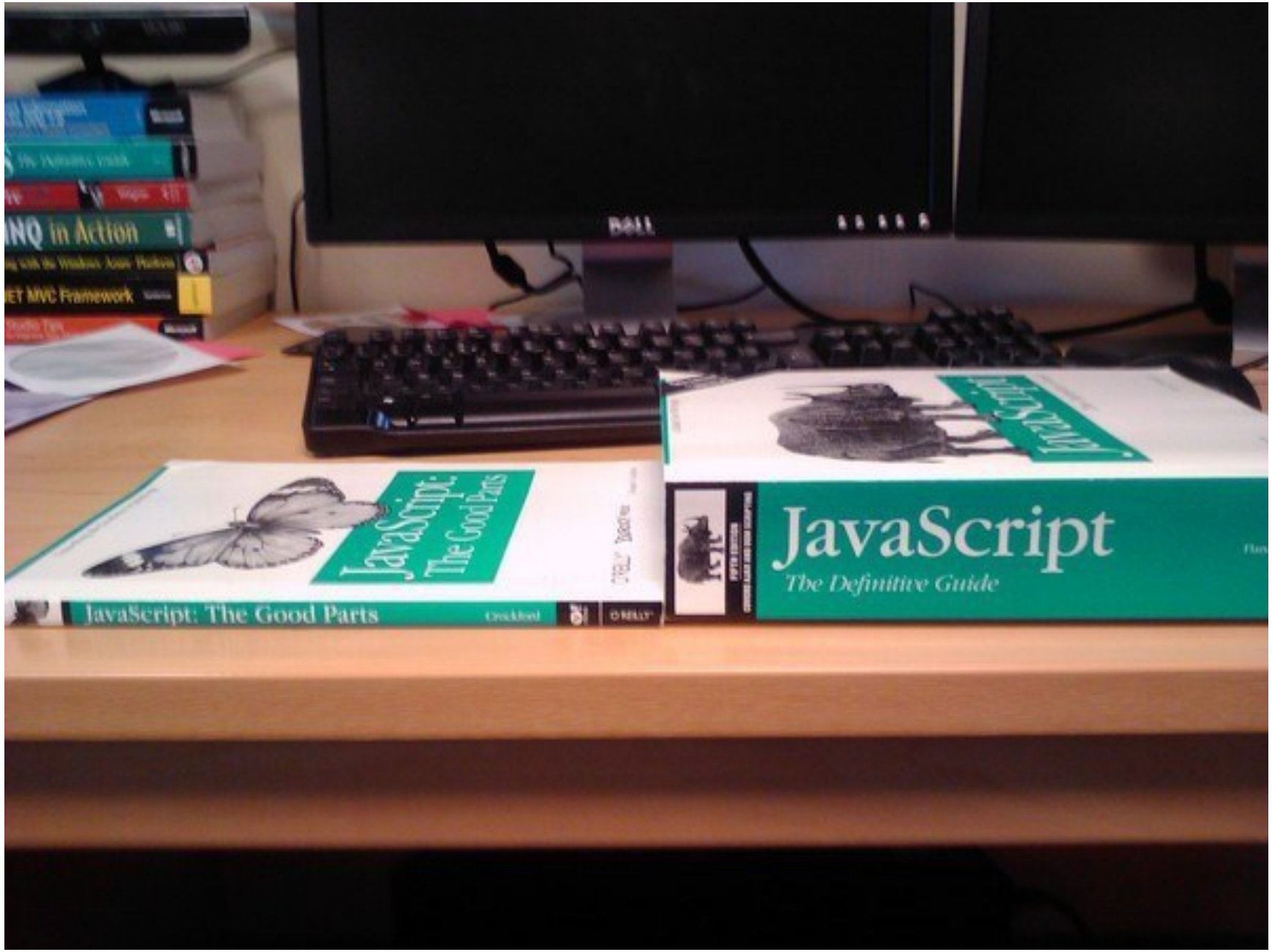
Geo
Download
GitHub
Guestbook
Tweet
Free Static Web Hosting
Geo for Bootstrap
A theme for Twitter Bootstrap, from Divshot.
Pick of the Week
YAHOO!
Web Community Development Award
WebWalkers What-A-Site Award
WebTrips Rockin' Site of the Week
To get started, download the "bootstrap.css" or "bootstrap.min.css" file and include it in yo
Typography
Navbar
Buttons
Forms
Tables
Miscellaneous
Typography
h1. Heading 1
h2. Heading 2
h3. Heading 3
h4. Heading 4
h5. Heading 5
h6. Heading 6
Example body text
Nullam quis risus eget urna mollis ornare vel eu leo. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Nullam id dolor id nibh ultricies vehicula ut id elit.
Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Duis mollis, est non commodo luctus, nisi erat porttitor ligula, eget lacinia odio sem nec elit. Donec sed odio dui.
Example addresses
Twitter, Inc.
795 Folsom Ave, Suite 600
San Francisco, CA 94107
P: (123) 456-7890
Full Name
first.last@gmail.com
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer posuere erat a ante.
Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer posuere erat a ante.

Actual web sites
I built.





```
1  true == 1                 → true
2  true == "1"               → true
3  false == 0                → true
4  false == "0"              → true
5
6  false == undefined        → false
7  false == null             → false
8
9  null == undefined         → true
```


NQ in Action
ET MVC Framework
JavaScript: The Good Parts
JavaScript
The Definitive Guide

Compile to JavaScript tools

- There are a lot.
  - 345
  - Source: https://github.com/jashkenas/coffeescript/wiki/List-of-languages-that-compile-to-JS
- Ruby, Python, Erlang, Java, Scala, C#, F#, Lisp, Scheme, Haskell, Smalltalk, C, C++, Basic, Go, PHP, and way more.

Fun names of compile-to-JS tools

- treehugger
- jangaroo
- Waterbear

The
WATERBEAR
welcomes you!

Waterbear is a toolkit for making programming more accessible and fun. Having a visual language means you don't have to focus on learning a syntax to start programming.

Try it out

http://waterbearlang.com/

Compile to JavaScript tools

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CoffeeScript is a little language that compiles into JavaScript. Underneath that awkward Java-esque patina, JavaScript has always had a gorgeous heart. CoffeeScript is an attempt to expose the good parts of JavaScript in a simple way.

The golden rule of CoffeeScript is: *"It's just JavaScript"*. The code compiles one-to-one into the equivalent JS, and there is no interpretation at runtime. You can use any existing JavaScript library seamlessly from CoffeeScript (and vice-versa). The compiled output is readable, pretty-printed, and tends to run as fast or faster than the equivalent handwritten JavaScript.

The CoffeeScript compiler goes to great lengths to generate output JavaScript that runs in every JavaScript runtime, but there are exceptions. Use generator functions, `for…from`, or tagged template literals only if you know that your target runtimes can support them. If you use modules, you will need to use an additional tool to resolve them.

Latest Version: 1.12.5

```
npm install -g coffee-script
```

CoffeeScript 2 is coming! It adds support for ES2015 classes, `async/await`, and generates JavaScript using ES2015+ syntax. Learn more.

CoffeeScript
Programming language

+ Compare

Worldwide | 9/1/09 - 11/1/17 | All categories | Web Search

Interest over time

```coffeescript
# Objects:
math =
  root:   Math.sqrt
  square: square
  cube:   (x) -> x * square x

# Splats:
race = (winner, runners...) ->
  print winner, runners

# Existence:
alert "I knew it!" if elvis?

# Array comprehensions:
cubes = (math.cube num for num in list)
```

Watch the videos for Dart Developer Summit 2016.

Open in DartPad

```dart
import 'dart:async';
import 'dart:math' show Random;

main() async {
  print('Compute π using the Monte Carlo method.');
  await for (var estimate in computePi()) {
    print('π ≅ $estimate');
  }
}

/// Generates a stream of increasingly accurate estimates of π.
Stream<double> computePi({int batch: 1000000}) async* {
  var total = 0;
  var count = 0;
  while (true) {
    var points = generateRandom().take(batch);
    var inside = points.where((p) => p.isInsideUnitCircle);
    total += batch;
    count += inside.length;
    var ratio = count / total;
    // Area of a circle is A = π·r², therefore π = A/r².
    // So, when given random points with x ∈ <0,1>,
```

Dart is an application programming language that's easy to learn, easy to scale, and deployable everywhere.

Google depends on Dart to make very large apps.

Get Started Install Dart

[Click underlined text or code to learn more.]

News
Follow the latest.

API
Browse core libraries.

Pub
Find packages.

Dart webdev
Build browser apps.

Flutter
Build mobile apps.

Dart
Programming language

+ Compare

Worldwide | 10/1/11 - 11/1/17 | All categories | Web Search

Interest over time

```
// Copyright (c) 2011, the Dart project authors.  Please see the AUT
// for details. All rights reserved. Use of this source code is gove
// BSD-style license that can be found in the LICENSE file.
// Simple test program invoked with an option to eagerly
// compile all code that is loaded in the isolate.
// VMOptions=--compile_all

class HelloDartTest {
  static testMain() {
    print("Hello, Darter!");
  }
}


main() {
  HelloDartTest.testMain();
}
```

Compiles to 17259 lines of JavaScript code. Now, most of it is just the library core, but it shows what you have to do to bolt static typing on top of a prototype-based, dynamic, truly object-oriented language.

```
// Copyright (c) 2011, the Dart project authors.  Please see the AUT
// for details. All rights reserved. Use of this source code is gove
// BSD-style license that can be found in the LICENSE file.
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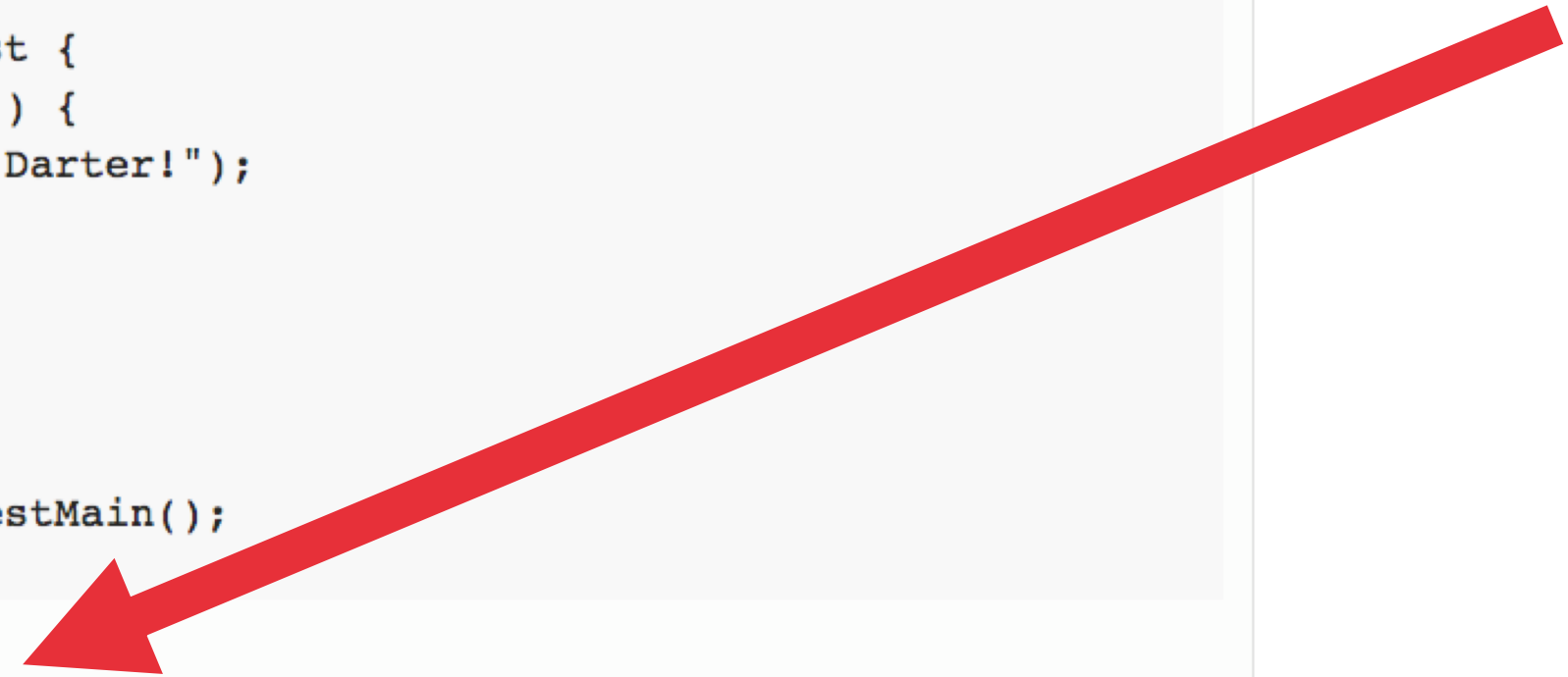

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Dart 2016
Developer Summit
Watch
Program
Speakers
Location
Info
Dart Dev Summit
2 days. 17+ talks.
October 26–27
Munich, Germany
WATCH

Microsoft augments JavaScript for large-scale development

In an extension to JavaScript, Microsoft provides static typing, classes and modularization

By IDG News Service staff

IDG News Service | OCT 1, 2012

TypeScript

Programming Language

+ Compare

Worldwide | 10/1/12 - 12/31/14 | All categories | Web Search

Interest over time

Why I Was Wrong About TypeScript

Progress®

TypeScript

Programming Language

+ Compare

Worldwide | 10/1/12 - 12/31/14 | All categories | Web Search

Interest over time

Microsoft

Visual
Studio

“We risk a lot by building our core on top of TypeScript.”

“I don’t hear anyone talking about TypeScript.”

“I like to keep my JavaScript pure, as God intended.”

Build better NativeScript apps with TypeScript

TypeScript is a first-class citizen in NativeScript.
TypeScript is a typed superset of JavaScript that compiles to plain JavaScript. In addition to the great features you like about JavaScript, TypeScript offers benefits of special interest to developers coming from Strongly Typed, or Object Oriented backgrounds.

Why TypeScript?

"TypeScript helped us to reuse the team's knowledge and to keep the same team velocity by providing the same excellent developer experience as C# ... A huge improvement over plain JavaScript."

TypeScript
Programming Lan...

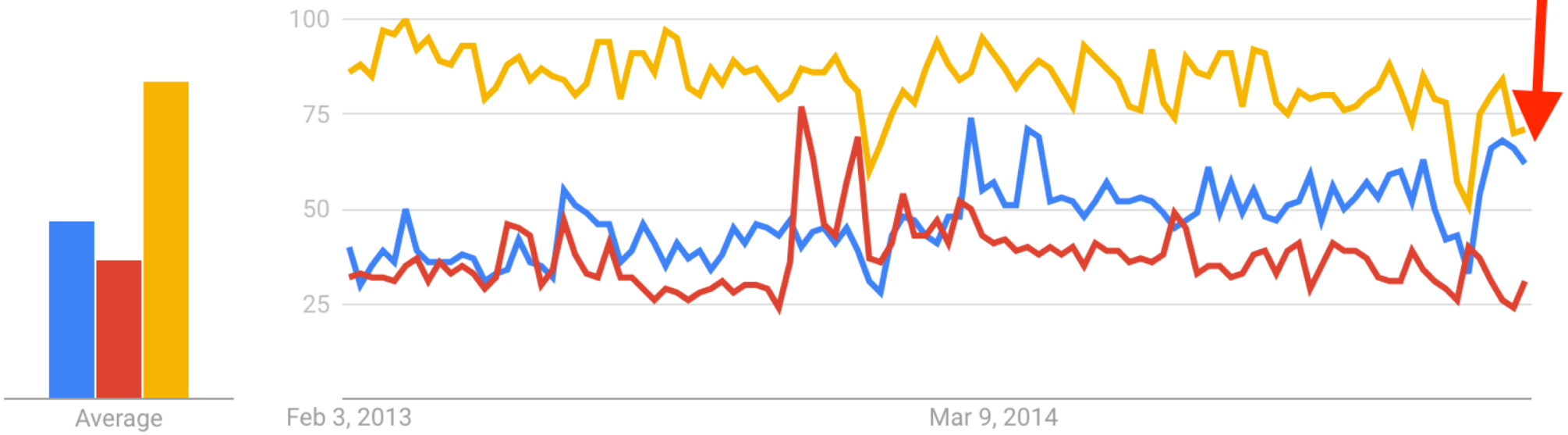
Dart
Programming lang...

CoffeeScript
Programming Lan...

+

Worldwide | 2/1/13 - 2/7/15 | All categories | Web Search

Interest over time



TypeScript
Programming language

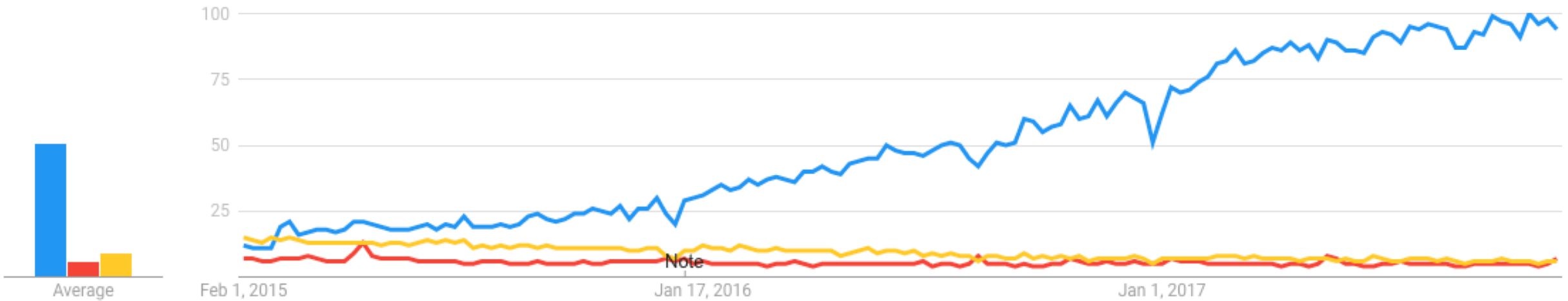
Dart
Programming language

CoffeeScript
Programming language

+ Add comparison

Worldwide | 2/1/15 - 11/1/17 | All categories | Web Search

Interest over time



Why I Was Wrong About TypeScript

Microsoft And Google Collaborate On Angular 2 Framework, TypeScript Language

Posted Mar 5, 2015 by Frederic Lardinois (@fredericl)

Next S

todo.ts

```
import {Component, Template} from 'annotations';
import {bootstrap, Foreach} from 'angular2/angular2';
import {bind} from 'angular2/di';
import {AngularFire, FirebaseArray} from 'firebase/AngularFire';

@Component({
    selector: 'todo-app',
    componentServices: [
        AngularFire,
        bind(Firebase).toValue(new Firebase('https://webapi.firebaseio-demo.com/test'))
    ]
})
@Template({
        url: '/todo.html',
        directives: [For]
    })
class TodoApp {
    todoService: FirebaseArray;
```

Foreach alias
FormData interface

ADVERTISEMENT

Crunchbase

Microsoft Launches Visual Studio Code, A Free Cross-Platform Code Editor For OS X, Linux And Windows

Posted Apr 29, 2015 by ***Frederic Lardinois*** *(@fredericl)*

Next Story

At its Build developer conference, Microsoft today announced the launch of Visual Studio Code, a lightweight cross-platform code editor for writing modern web and cloud applications that will run on OS X, Linux and Windows. The application is still officially in preview, but you can now download it here.

Crunchbase

Microsoft –

FOUNDED
1974

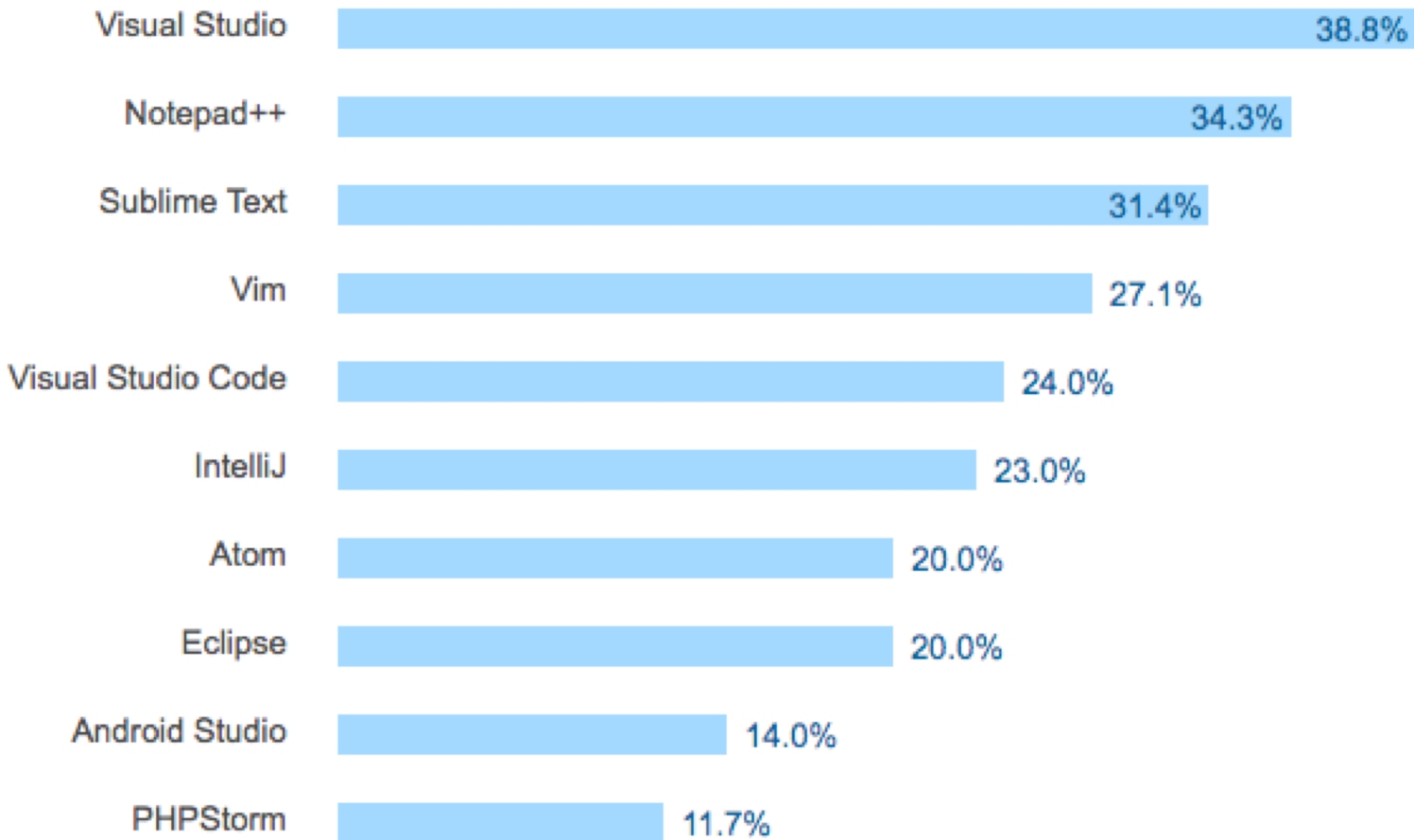
OVERVIEW
Microsoft is an American multinational corporation that develops, manufactures, licenses, supports, and sells a range of software products and services. Microsoft's devices and consumer (D&C) licensing segment licenses Windows operating system and related software; Microsoft Office for consumers; and Windows Phone operating system. The company's computing and gaming hardware segment provides ...

LOCATION
Redmond, WA

CATEGORIES
Collaboration, Developer Tools, Cloud Computing,

Most Popular Developer Environments by Occupation

Web Developer | Desktop Developer | Sysadmin / DevOps | Data Scientist/Engineer



Tom Dale
@tomdale

Follow

I'm sold on TypeScript. Would like to move as many of my projects to it as I can, not sure about the Node workflow though.

RETWEETS **27** LIKES **44**

3:43 PM - 20 Jan 2016

21 27 44

Dave Herman @littlecalculist

I ported my first nontrivial JS lib to @typescriptlang and it was a pure joy. What a lovely piece of technology.

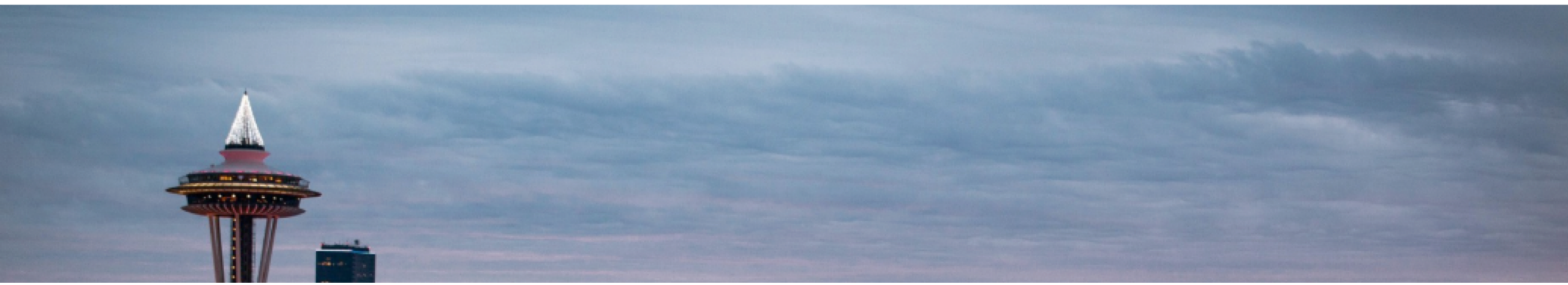
Felix Rieseberg Follow

Desktop Engineer @Slack. @TryGhost Core Team. || Previously open source @Microsoft, exec edito...

Apr 11 · 7 min read

TypeScript at Slack

Or, How I Learned to Stop Worrying & Trust the Compiler



Why?

3 reasons

1) Commitment to the ECMAScript standard

“Some examples [of compile-to-JavaScript frameworks], like Dart, portend that JavaScript has fundamental flaws and to support these scenarios requires a “clean break” from JavaScript in both syntax and runtime. We disagree with this point of view. We believe that with committee participant focus, the standards runtime can be expanded and the syntactic features necessary to support **JavaScript at scale can be built upon the existing JavaScript standard**.”

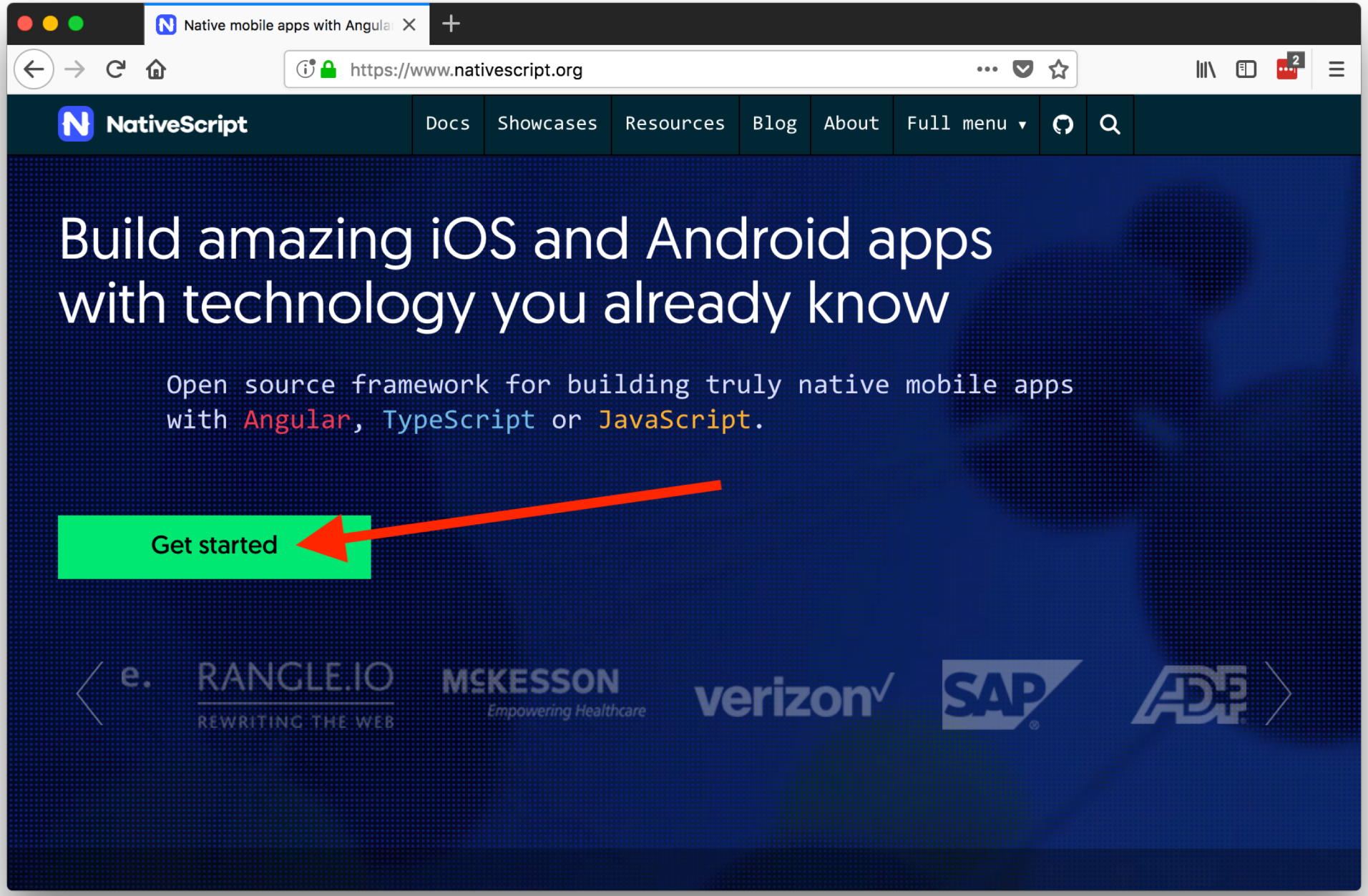
		97%	Compilers/polyfills				
			56%	71%	48%	59%	18%
Feature name	▶	Current browser	Traceur	Babel + core-js[2]	Closure	Type-Script + core-js	es6-shim
Optimisation							
proper tail calls (tail call optimisation)	▶	0/2	0/2	0/2	0/2	0/2	0/2
Syntax							
default function parameters	▶	7/7	4/7	4/7	4/7	5/7	0/7
rest parameters	▶	5/5	4/5	3/5	2/5	4/5	0/5
spread (...) operator	▶	15/15	15/15	13/15	12/15	4/15	0/15
object literal extensions	▶	6/6	6/6	6/6	4/6	6/6	0/6
for..of loops	▶	9/9	9/9	9/9	6/9	3/9	0/9
octal and binary literals	▶	4/4	2/4	4/4	4/4	4/4	2/4
template literals	▶	5/5	4/5	4/5	3/5	3/5	0/5
RegExp "y" and "u" flags	▶	5/5	3/5	3/5	0/5	0/5	0/5
destructuring, declarations	▶	22/22	20/22	21/22	19/22	15/22	0/22
destructuring, assignment	▶	24/24	23/24	24/24	17/24	19/24	0/24
destructuring, parameters	▶	23/23	19/23	20/23	18/23	15/23	0/23
Unicode code point escapes	▶	2/2	1/2	1/2	1/2	1/2	0/2

2) Types are opt-in

3) Tooling

So should you use TypeScript?

- Are your apps big?
- Do you work on a team?
- Unfamiliar codebases?
- Non JS developers that need to write JS code?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https://www.nativescript.org
NativeScript
Docs
Showcases
Resources
Blog
About
Full menu
Build amazing iOS and Android apps with technology you already know
Open source framework for building truly native mobile apps with Angular, TypeScript or JavaScript.
Get started
RANGLE.IO
REWRITING THE WEB
McKESSON
Empowering Healthcare
verizon
SAP
ADP

Thanks!

@tjvantoll