

TypeScript with NodeJS

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I work at Metaware Labs.

We make web & mobile apps.

TypeScript: Javascript that scales

Superset of JS that compiles down to plain JS.



Valid JS (may) \neq Valid TS

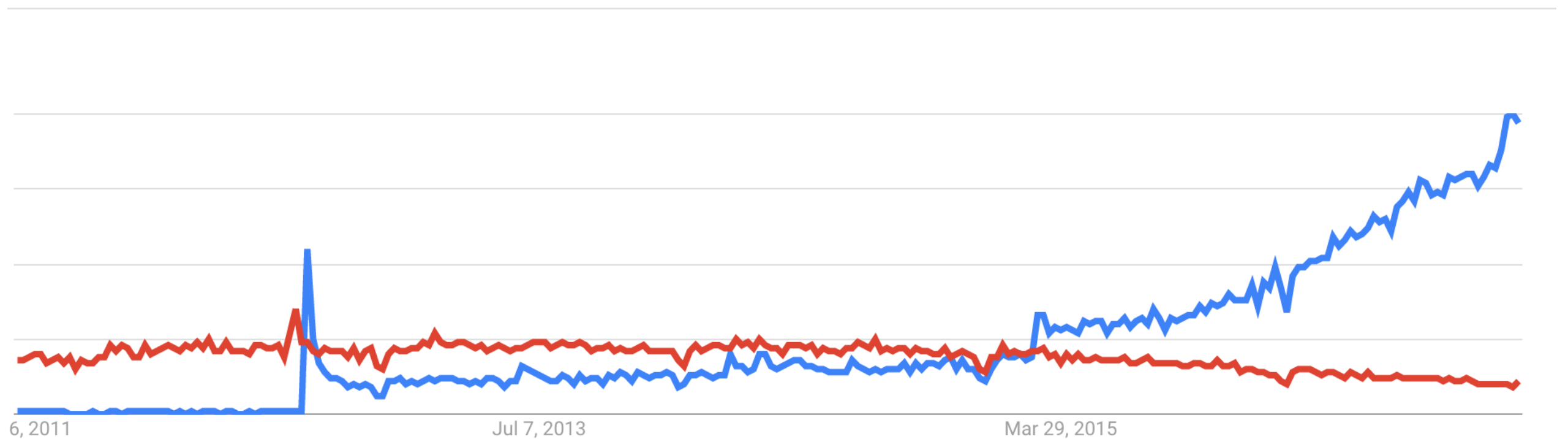
Developed by Microsoft



@NOWTHISNEWS

Free & Open Source
Been around since 2012

Gaining traction*



* we are in JS land



Friends of TypeScript



Editor/IDE Support



Sublime Text



Emacs



Atom



WebStorm



Eclipse



Vim

How to get started

```
$ npm install -g typescript  
$ vim app.ts  
// write typescript code  
$ tsc app.ts  
$ node app.js
```

Basic Types

```
let size: number = 3;  
let isManagingPartner: boolean = true;  
let name: string = "Harvey Specter";  
let friends: Array<string> = ['Mike  
Ross', 'Jessica Pearson', 'Louis  
Litt'];  
  
size = 'Rachel Zane';  
// Type 'string' is not assignable to  
type 'number'.
```

Special Type `any` allows any values

```
let foo: any  
foo = 1;  
foo = 'one';  
foo = [1]
```

Type Inference

```
let foo = 3;  
foo = 'three';  
// Type 'string' is not  
assignable to type 'number'.
```

function parameters & return values

```
function authenticate(username: string, password: string): boolean {  
    // some authentication logic  
    return true;  
}
```

```
function authenticate(user: { username: string, password: string }): boolean {  
    // some authentication logic  
    return true;  
}
```


Interfaces

```
{  
  firstName: 'John',  
  lastName: 'Doe',  
  // age is optional  
  fullName: function() {  
    return this.firstName + ' ' + this.lastName  
  }  
  address: {  
    city: 'Toronto',  
    postalCode: 'M5M M5M'  
  }  
}
```

Interfaces

```
interface User {  
  firstName: string,  
  lastName: string,  
  age?: number,  
  fullName(): string,  
  address: {  
    city: string,  
    postalCode: string  
  }  
}
```

More Features

- **Generics**
- **Interfaces**
- **Enums**
- **Classes, Inheritance & access level**
- **JSX Support**
- **Modules**
- **A lot more..**

No Lock In & Gradual Migration

Using 3rd party JS libraries with TS

Typings or TSD?

Code Walkthrough

Closing Thoughts

- **Improve team collaboration**
- **Improve code clarity**
- **Any OS, Any Browser, Any Host**
- **Growing Community**
- **No Lock-in**

THANKS!

QnA

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<http://github.com/jasdeep Singh>

<https://github.com/metaware/typescript-shopping-cart>