

THE INTRODUCTION TO

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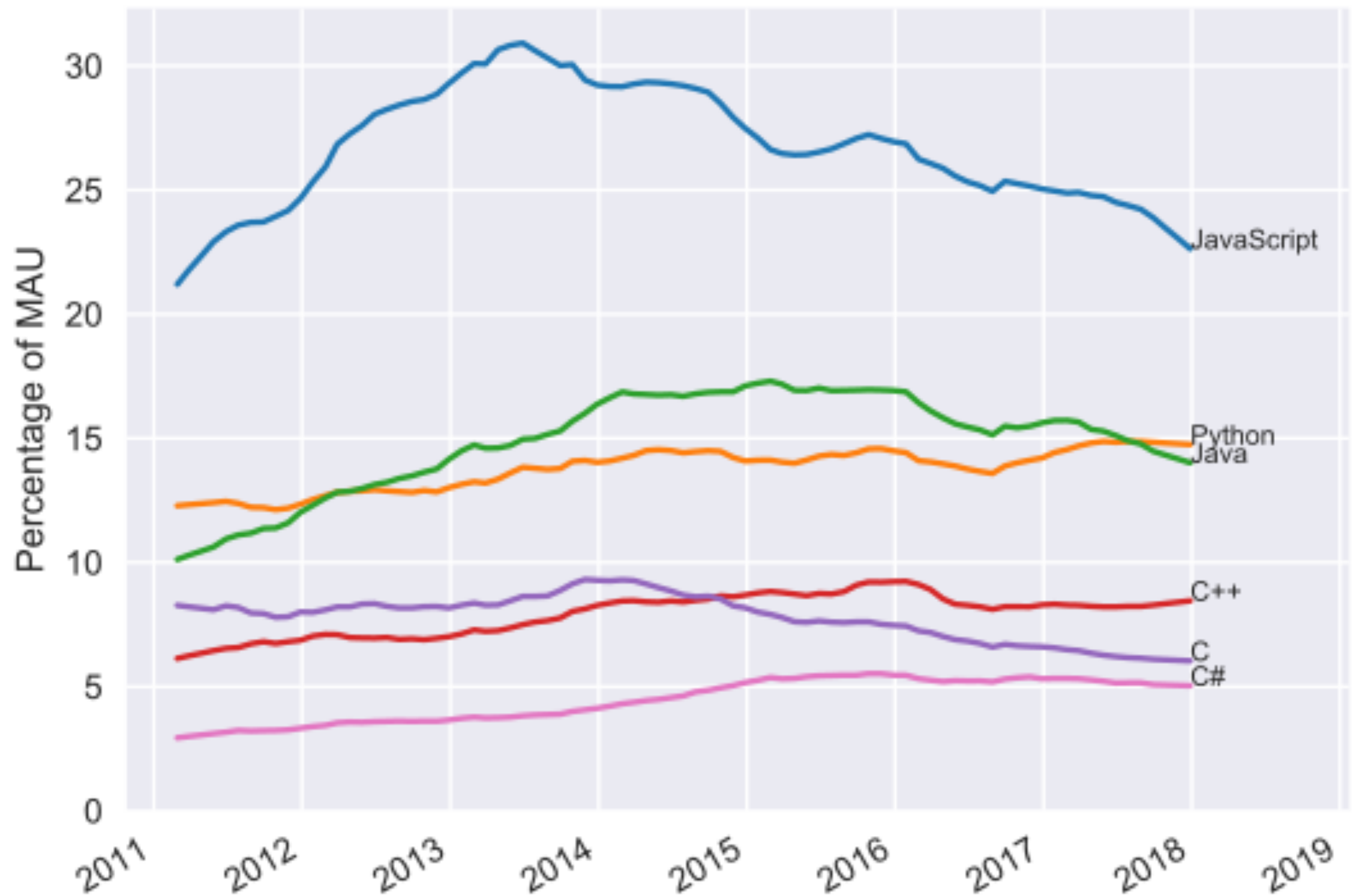
**JAVASCRIPT**

## HISTORY

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- ▶ Created by Brendan Eich in 1995 for Netscape Navigator 2 release.
- ▶ It only took Brendan Eich 10 days to create a working prototype.
- ▶ Originally Called Mocha - then LiveScript - then at the release of 1.1 it was changed to JavaScript.
- ▶ As JavaScript picked up popularity. A standardization of the language was needed to define the core implementation of the language.
- ▶ ECMA (European Computer Manufacturer's Association) or ECMAScript - defines the standards for scripting languages such as JavaScript.

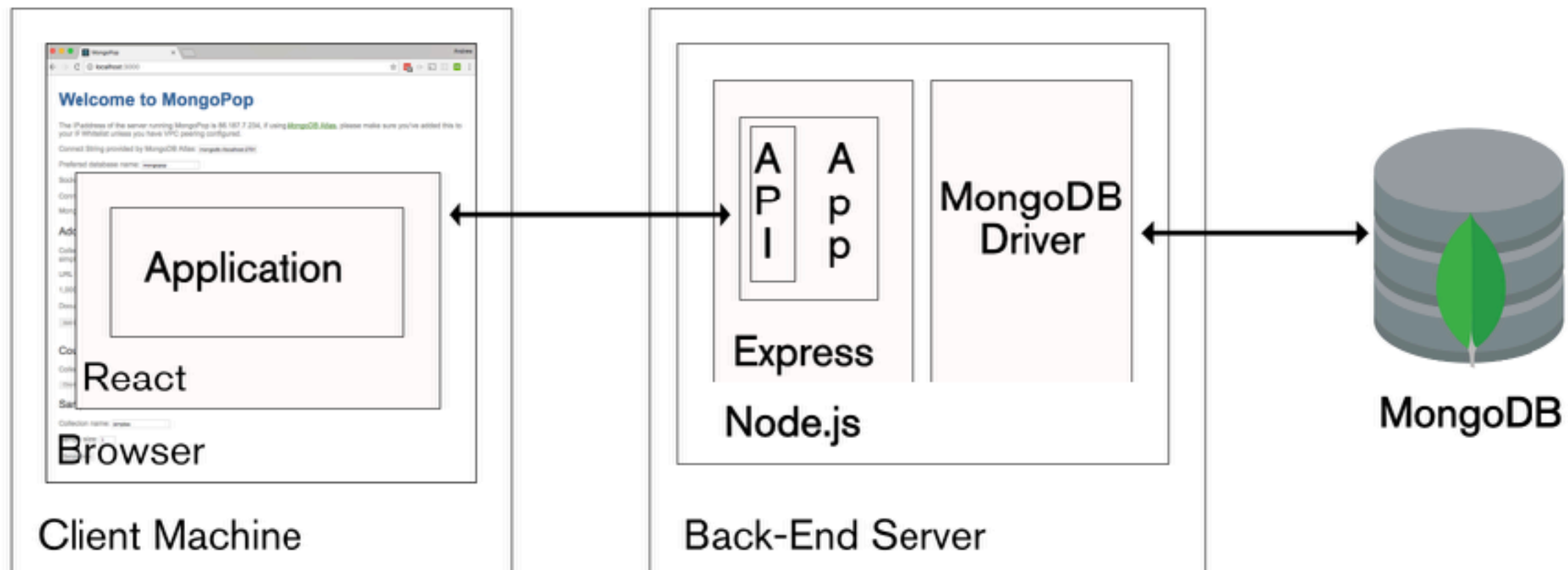
# WHY JAVASCRIPT



MAU = Monthly Active Users

## WHY JAVASCRIPT (CONT)

- ▶ JavaScript was created out of the need to make websites more dynamic.
- ▶ It can be used across the full-stack.



- ▶ Client Side - Makes requests, and displays what the users sees on a web page.
  - ▶ Examples of client side applications: Chrome - Safari - IE
- ▶ Server Side - Responds to requests made by the client, and sends the requested information to the client.
  - ▶ Examples of servers side applications: nodeJS - ExpressJS
- ▶ Database - Uses JSON (JavaScript Object Notation) documents to store information.
  - ▶ Examples of database applications that use JSON - PostgreSQL - mongoDB

- ▶ No context switching!!
  - ▶ This allows you to focus on using only JavaScript throughout the entire stack to create applications. This versatility makes JavaScript great for beginners.
- ▶ Web development has gravitated towards responsive, dynamic applications running in the browser.
  - ▶ Examples: Gmail, Twitter, Facebook, Google Maps.

## WHERE JAVASCRIPT FITS IN ON THE FRONTEND

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- ▶ HTML (Hyper Text Markup Language) - for Content

- ▶ `<p class="title">Hello, class!</p>`

- ▶ CSS (Cascading Style Sheets) - for Presentation

- ▶ `.title { color: red; }`

- ▶ JavaScript for Behavior

- ▶ `<script type="text/javascript">  
window.alert(document.getElementsByClassName("title  
")[0].innerHTML); </script>`

- ▶ Values are data types have a set purpose and a essential behavior.
- ▶ Examples of Primitive Data Types:
  - ▶ String: "Hello"
  - Number: 2
  - Boolean: false
  - Undefined: undefined
  - Null: null

Primitive Data Type are Immutable.

[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Data\\_structures](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Data_structures)

Check out that link for more info on Data types.



## STRINGS

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- ▶ Strings are just a set of characters separated by a series of apostrophes or quotation marks.
- ▶ Exp: "Hello" , "Kirk", 'Jesse', 'Puppies'

```
var sayHello = "Hello";  
var myName = "Kirk"  
var myTwinsName = "Jesse"  
var youngDoggies = "Puppies"
```

## NUMBERS

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- ▶ JavaScript has only one type of number. All numbers can be written with or without decimals. Max number of decimals is 17. Integers are accurate up to 15 digits.
  - ▶ Exp:  
3    3.14    0.28
- ▶ Extra large or small numbers can be written with scientific notation.
  - ▶ Exp:  
158e29    158e-29

- ▶ Booleans represent two values, either "true" or "false" and are often used to find out if an express is true or false;

- ▶ Exp:

`10 > 9 // returns true`

`4 < 3 // returns false`

## VARIABLES

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- ▶ A variable is an identifier or label for a value.  
Or a tool to store a value.
- ▶ How to create a variable.
  1. Var Keyword
  2. Name of Variable
  3. Assignment Operator
  4. Value to Assign
- ▶ Example:

```
var sayHello = "Hello";
```

- ▶ Comments are annotations in the source code of a program that are ignored by the interpreter, and therefore have no effect on the actual output of the code. Comments can be immensely helpful in explaining the intent of what your code is or should be doing.
- ▶ Single line comments are written with two forward `//`
  - ▶ Example: 

```
3 //this is a single line comment
```
- ▶ Multi-line comments or Block comments are written with opening tags `/*` and closing tags `*/`
  - ▶ Example: 

```
5 /*  
6  this is a multi-line comment  
7  */
```

Semicolons terminate statements. They're optional in JavaScript - However I recommend you using them, because otherwise JavaScript can guess wrong about the end of a statement.

```
9  var x = 10 * 10;
```

- ▶ Mozilla Developer Network is the official Mozilla website for development documentation of web standards and Mozilla projects. A huge resource to look into specific JavaScript functionality <https://developer.mozilla.org/en-US/>
- ▶ <https://repl.it> is a tool that allows you to run simple programs written in multiple languages including JavaScript with an integrated console.
- ▶ <https://stackoverflow.com/> - **Stack Overflow** is a question and answer site for professional and enthusiast programmers. If you have questions about a programming pattern, or problem - this site is an invaluable tool that professional software engineers use everyday.