



CoffeeScript

a better way to write javascript

高見龍





You can get this slide on
www.eddie.com.tw/slides

Who am I ?

I'm a Flash guy.



高見龍

a.k.a Eddie or Aquarianboy

- Live and work in Taipei, Taiwan.
- Serving in my own little tiny company.
- Flash / AS3 / Ruby / Rails / Python programming for living.
- A little bit Objective-C for personal interests.
- Technical Education and Consultant.
- PTT Flash BM (since 2007/4).
- Adobe Certificated Flash Developer (Since 2006/7).
- Linux Professional Institute Certification (Since 2005/3).



or just google me with keyword "高見龍"

A photograph of a presentation in a dark auditorium. A speaker stands on a stage to the right of a large projection screen displaying a slide with a pie chart. The audience is visible in the foreground, seated in rows of chairs.

JavaScript
becomes
hugely
popular.

9th on TIOBE, Nov 2011

A close-up photograph of a single slice of dark chocolate cake on a white plate. The cake has a moist, crumbly texture and is topped with a few fresh blueberries. The plate is set against a light-colored wooden background.

JavaScript
seems
easy..

But it's
not easy
to write
good
JavaScript
code.



Today, I won't tell you..
You should give up the way you did

I am going to tell you..

Maybe you have a better way to do with this

CoffeeScript

We're not
talking
about this
kind of
coffee.



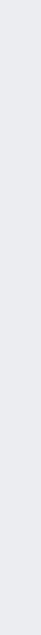
WTF?

CoffeeScript is JavaScript
just written with different syntax

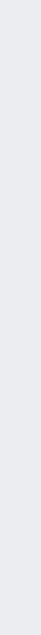
..exposes the good parts of
JavaScript in a simple way.

Syntax borrowed from
Python and Ruby.

I love Python & Ruby



..and will be compiled into
JavaScript code.

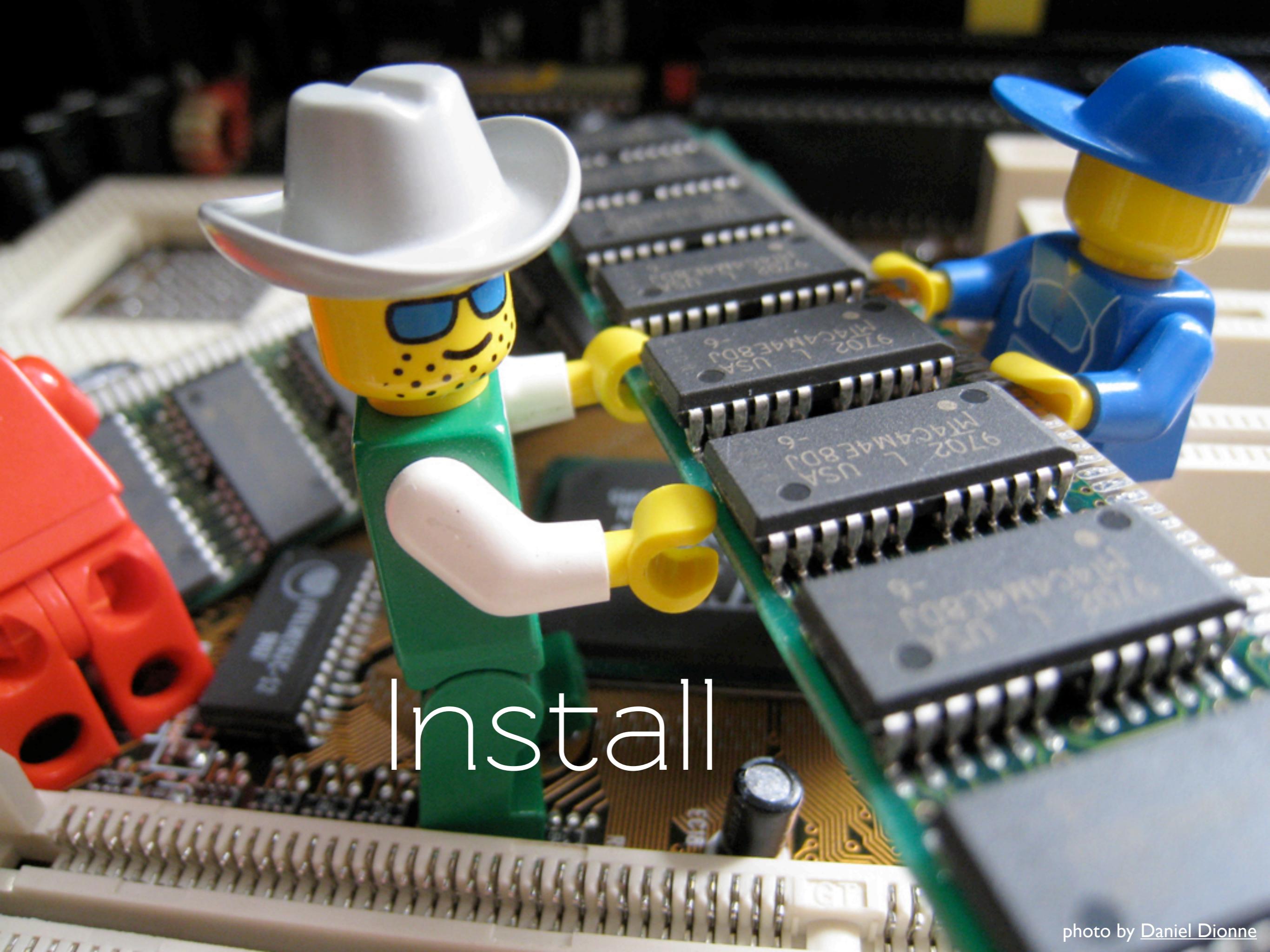


..that doesn't mean you can
have no knowledge about
JavaScript.

CoffeeScript is not used
to replace JavaScript.

A photograph of a young boy from behind, walking barefoot on a wet, sandy beach. He is wearing a dark t-shirt, dark pants, and a light-colored baseball cap. The ocean waves are visible in the background under a cloudy sky.

Let's get our feet wet!



Install

Requirements

You need to install some software first..

Node.js

```
> git clone git://github.com/joyent/node.git  
> cd node  
> ./configure  
> make  
> sudo make install
```

Requirements

You need to install some software first..

NPM, the “node package manager”

```
> curl http://npmjs.org/install.sh | sh
```

Install CoffeeScript

CoffeeScript

```
> npm install coffee-script  
> coffee -v  
CoffeeScript version 1.1.3
```



How to use

Usage

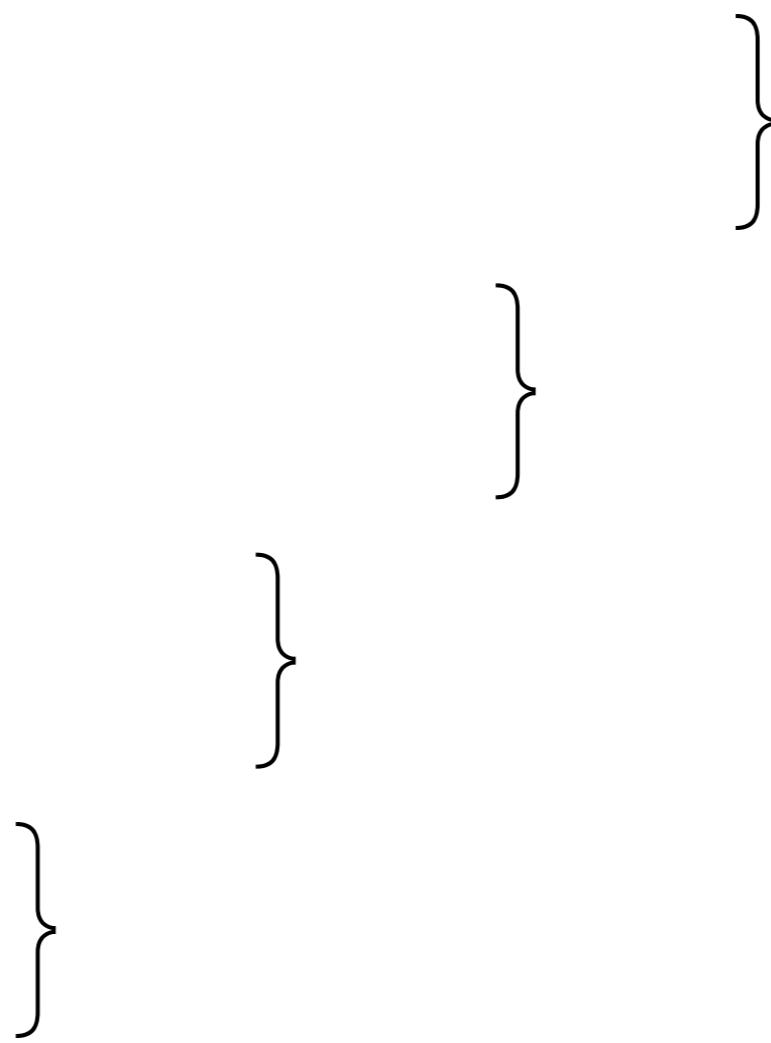
Compile *.coffee into *.js

Compile

```
> coffee --watch --compile app.coffee
```



Syntax



No { }
indentations rule!
whitespace matters!

() is not necessary.

No trailing semicolon.

Return is not necessary.

everything is an expression

No {}, (), and ;

```
if(age > 20){  
    vote();  
}
```

// javascript

```
if age > 20  
    vote()
```

coffeescript

Variable & Function

Variable

You don't have to declare it before using it.

```
lang = ["php", "python", "perl", "ruby"]  
name = "Eddie"
```

coffeescript

```
var lang, name;  
lang = ["php", "python", "perl", "ruby"];  
name = "Eddie";
```

// javascript

Function

```
say_hello = (guest1, guest2 = "Nayumi") ->  
  "Hello #{guest1} and #{guest2}"
```

```
say_hello "Eddie"
```

coffeescript

```
var say_hello;  
say_hello = function(guest1, guest2) {  
  if (guest2 == null) {  
    guest2 = "Nayumi";  
  }  
  return "Hello " + guest1 + " and " + guest2;  
};  
say_hello("Eddie");
```

// javascript

Array

Array

```
heroes = [  
  'Spider Man',  
  'Captain America',  
  'X-men',  
  'Iron Man'  
]
```

```
students = [1..10]  
teachers = [1...10]
```

coffeescript

```
var heroes, students, teachers;  
heroes = ['Spider Man', 'Captain America', 'X-men', 'Iron Man'];  
  
students = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10];  
teachers = [1, 2, 3, 4, 5, 6, 7, 8, 9];
```

// javascript

Array

```
heroes[0..2]
```

```
heroes[1..2] = ["Batman", "ThunderCat"]
```

coffeescript

```
heroes.slice(0, 3);
```

```
var __ref;  
[].splice.apply(heroes, [1, 2].concat(__ref = ["Batman", "ThunderCat"])), __ref;
```

// javascript

Object

Object

```
eddie = { name: "Eddie Kao", age: 18, speciality: "eat" }
```

coffeescript

```
var eddie;  
eddie = {  
  name: "Eddie Kao",  
  age: 18,  
  speciality: "eat"  
};
```

// javascript

Object

```
eddie =  
  name: "Eddie Kao"  
  age: 18  
  lovers:  
    nayumi:  
      name: "Nayumi Hung"  
      age: 18  
    mary:  
      name: "Mary Bloody"  
      age: 20
```

coffeescript

```
var eddie;  
eddie = {  
  name: "Eddie Kao",  
  age: 18,  
  lovers: {  
    nayumi: {  
      name: "Nayumi Hung",  
      age: 18  
    },  
    mary: {  
      name: "Mary Bloody",  
      age: 20  
    }  
  }  
};
```

// javascript

Loop

Loop

```
alert i for i in [1..10]
```

```
alert i for i in [1..10] when i  
% 2 == 0
```

```
alert i for i in [1..10] by 2
```

```
alert i * 2 for i in [1..10]
```

```
# coffeescript
```

```
var i, _step;  
for (i = 1; i <= 10; i++) {  
  alert(i);  
}  
for (i = 1; i <= 10; i++) {  
  if (i % 2 === 0) {  
    alert(i);  
  }  
}  
for (i = 1, _step = 2; i <= 10; i +=  
  _step) {  
  alert(i);  
}  
for (i = 1; i <= 10; i++) {  
  alert(i * 2);  
}
```

// javascript

Modifier

Modifier

You can put "if", "unless", "while", "until" behind

```
if (age > 20) {  
    vote();  
}
```

// javascript

```
vote() if age > 20
```

coffeescript

Syntactic Sugar

Syntactic Sugar

write more readable code by using syntactic sugar.

coffeescript // javascript

is	==
isnt	!=
true, on, yes	true
false, off, no	false
not	!
and	&&
or	
unless	if not
until	while not
of	in

Syntactic Sugar

alert "I can't see anything" if light is off

alert "It's impossible!" if eddie isnt handsome

if girl is not single

 alert "Don't Touch! Be Careful!"

coffeescript

```
if (light === false) {  
    alert("I can't see anything");  
}  
  
if (eddie !== handsome) {  
    alert("It's impossible!");  
}  
  
if (girl === !single) {  
    alert("Don't Touch! Be Careful!");  
}
```

// javascript

Syntactic Sugar

```
if (Answer === true) {  
    alert("I'll marry you!");  
}
```

// javascript

alert "I'll marry you!" if Answer is yes

Syntactic Sugar

```
age ?= 18
```

coffeescript

```
if (typeof age !== "undefined" && age !== null) {  
    age;  
} else {  
    age = 18;  
};
```

// javascript

Raw JavaScript

If you still prefer the original way

Raw JavaScript

```
say_hello = `function(name){  
    return "Hello, " + name  
}`
```

coffeescript

```
var say_hello;  
say_hello = function(name){  
    return "Hello, " + name  
};
```

// javascript

OOP

OOP - new

```
class Animal  
  constructor: (name, age) ->  
    this.name = name  
    this.age = age
```

```
animal = new Animal("eddie", 18)  
alert animal
```

coffeescript

```
var Animal, animal;  
Animal = (function() {  
  function Animal(name, age) {  
    this.name = name;  
    this.age = age;  
  }  
  return Animal;  
})();  
animal = new Animal("eddie", 18);  
alert(animal);
```

// javascript

OOP - method

```
class Animal
  constructor: (@name, @age) ->
    say_hello: (something) ->
      console.log "Hello, #{something}"

  animal = new Animal("eddie", 18)
  animal.say_hello("CoffeeScript")                                # coffeescript
```

```
var Animal, animal;
Animal = (function() {
  function Animal(name, age) {
    this.name = name;
    this.age = age;
  }
  Animal.prototype.say_hello = function(something) {
    return console.log("Hello, " + something);
  };
  return Animal;
})();
animal = new Animal("eddie", 18);                                    // javascript
animal.say_hello("CoffeeScript");
```

OOP - inheritance

```
class Animal  
  constructor: (@name, @age) ->  
    say_hello: (something) ->  
      alert "Hello, #{something}"
```

```
class Human extends Animal  
  walk: ->  
    alert "I can walk with my foots!"
```

```
eddie = new Human("eddie", 18)  
eddie.say_hello "CoffeeScript"  
eddie.walk()                                # coffeescript
```

TL; DR

// javascript

References

Websites:

<http://jashkenas.github.com/coffee-script/>

<http://blog.eddie.com.tw/category/coffeescript/>

Book:

<http://pragprog.com/book/tbcoffee/coffeescript>



the good parts
I love

I Love..

Coding Style

I love Python & Ruby, of course :)

I Love..

Indentation!

I Love..

Anonymous function

No global function and variable by default

I Love..

String Interpolation

sorry, but string building really sucks :)

I Love..

List Comprehension

I Love..

Syntactic Sugar

I Love..

English-like grammar

alert "of course it is!" if PHPConf is awesome

I Love..

Comparison & Equality

"true" == true // true

"true" === true // false

I Love..

Works with other JS
frameworks well.

Because it's just JavaScript

I Love..

Compilation

JSLint Approved

What else?

CoffeeScript compiler is
written in CoffeeScript.



Titanium Mobile

<http://blog.eddie.com.tw/2011/08/03/using-coffeescript-in-titanium-studio/>



Ruby on Rails

Sustainable productivity for web-application development



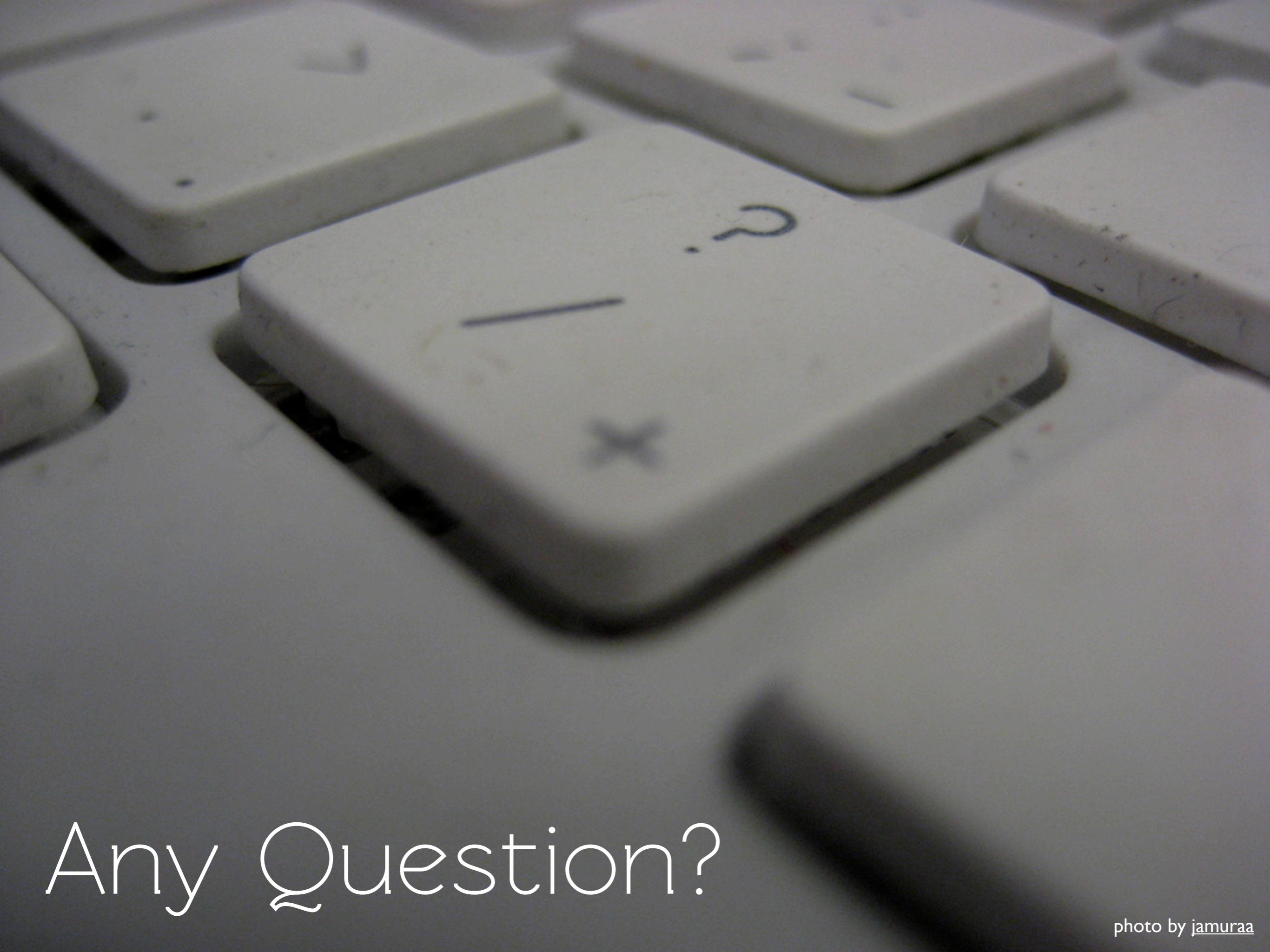
Immature?



Performance?

CoffeeScript Means Giving
Up on JavaScript?

Learn JavaScript, and Use
CoffeeScript.



Any Question?

Contacts

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photo by Eddie