Welcome to

Learn to Code Seattle

wifi: galvanize guest seattle

Last updated: 1/2/2017

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About Galvanize

Dynamic learning community for technology

- web development
- workspace
- data science
- networking

To learn more, visit galvanize.com

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For more information

Email our team at
info@galvanize.com
or
Visit our website at
galvanize.com

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But first...

#SeaLTC

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EPIC ROCK PAPER SCISSORS

- Best 2 out of 3 contests to advance
- Players say “Rock, Paper, Scissors, SHOOT” simultaneously and present their choice on “SHOOT” - otherwise, re-do that round
- Winner advance and finds someone else to battle
- Non-winner becomes acolyte of the winner and provides moral support
- When we are down to the last 2 - FINAL SHOWDOWN

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Workshop

Intro to JavaScript

Last updated: 1/2/2017

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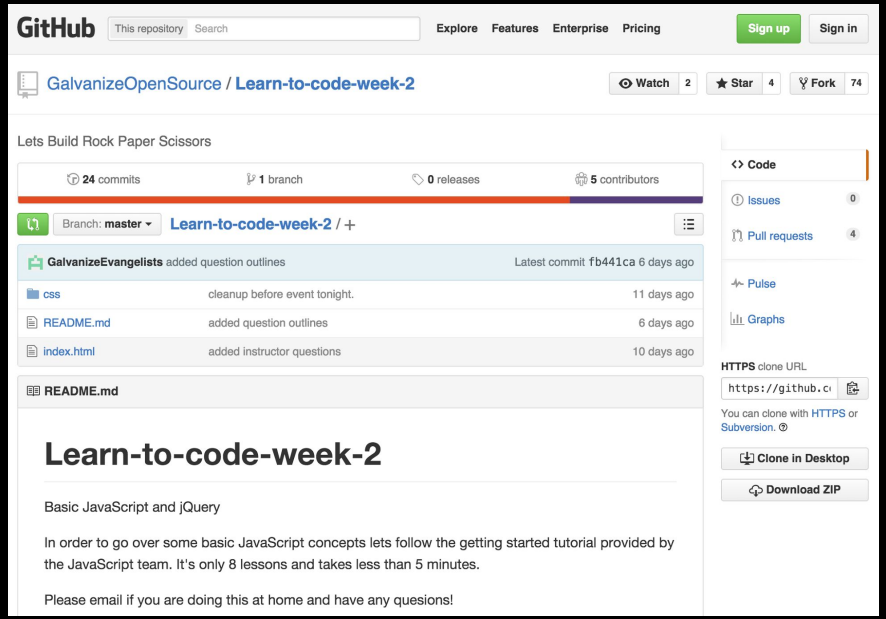
Source Code for this Workshop



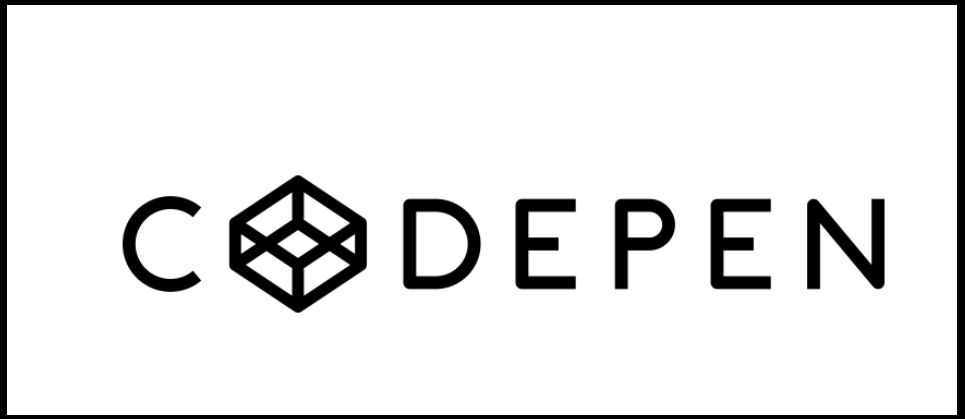
github.com/GalvanizeOpenSource/Learn-To-Code-JavaScript

We'll explain how you will use this link

Do you have a text editor?

We recommend that you use Atom, which is build and maintained by GitHub at: atom.io

Otherwise, use CodePen

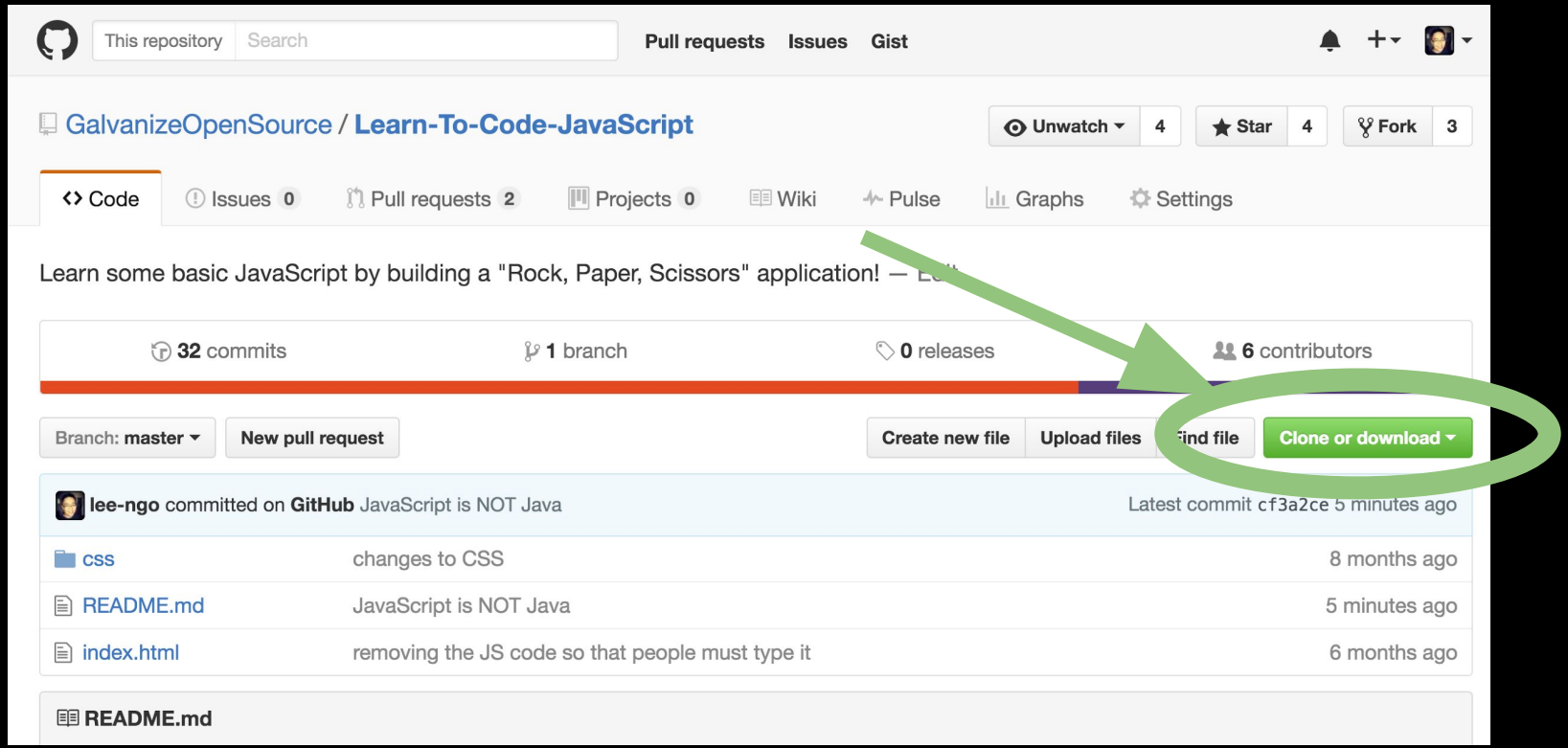


You can do this entire lesson within your web browser:
http://codepen.io/hienpd/pen/GqZNxj

Download the code!

1. Go to: github.com/GalvanizeOpenSource/Learn-To-Code-JavaScript/
2. Download the zip file of our code
3. Open the files in your text editor
    a. index.html
    b. CSS/style.css
4. Open the index.html file in your browser

The Download ZIP is right there...



Pictures of Kittens

Setting up everything can be stressful!

Recap from Workshop 1

- **Set up** your computer for web development
- Overview of basic **HTML** concepts
- Overview of **CSS** concepts
- Working in the **sandbox**

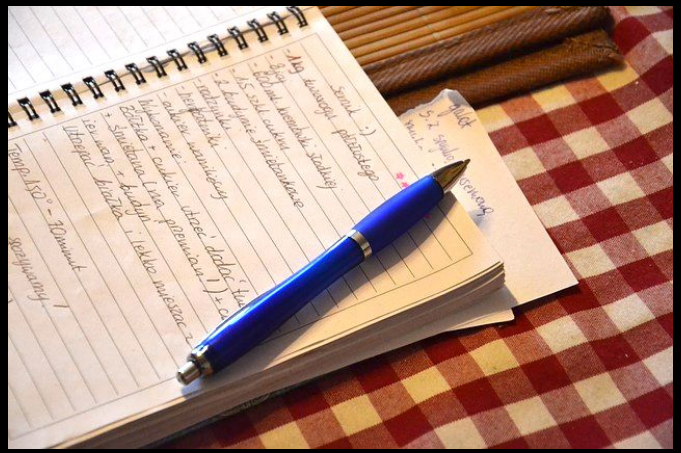
In this course you will learn

- **Basic syntax** of JavaScript
- **Variables** and **Functions**
- **Conditional statements** (if, else if, else)
- Build a “**Rock, Paper, Scissors**” application

Gut check, Galvanize style!

- This course is for beginners
- Feel free to move ahead
- Help others when you can
- Be patient and nice
- We'll all get through it!

What web coding is (really!)



&

Recipes to give to your computer to “cook” up some awesome things for you online

Remember this?

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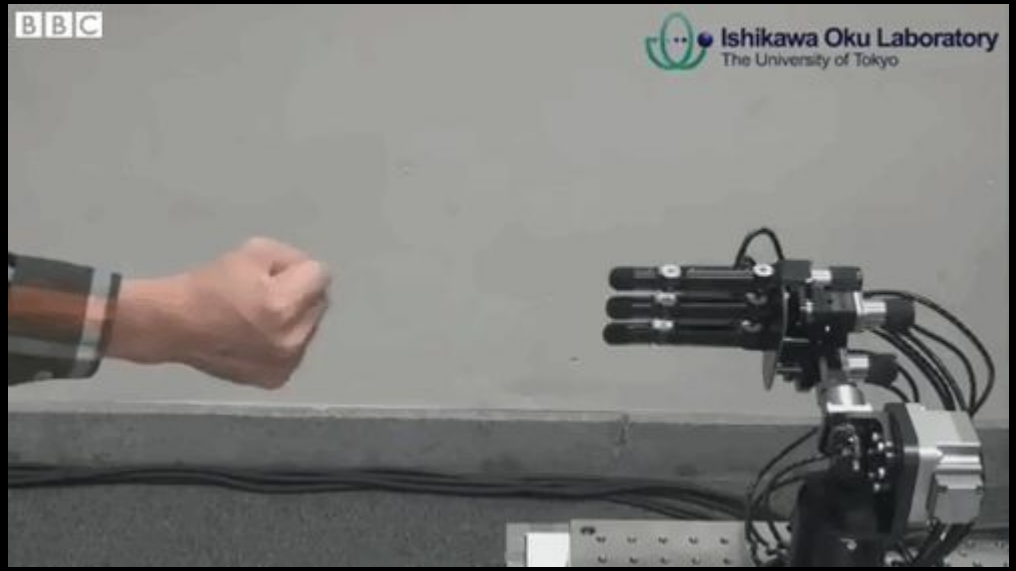
We’re going to make our own app!



You are going to play with (against) the computer!

4 Steps to Building This App

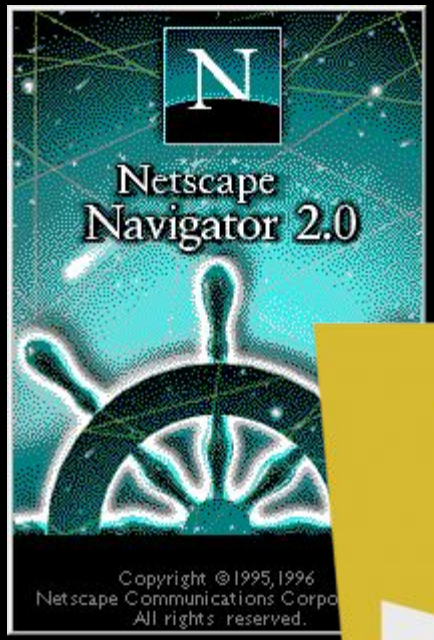
1. Get the user's choice
2. Get the computer's choice
3. Teach the computer how to guess rock, paper, or scissors
4. Compare their choices and tell the user the result

But first...

What IS JavaScript?

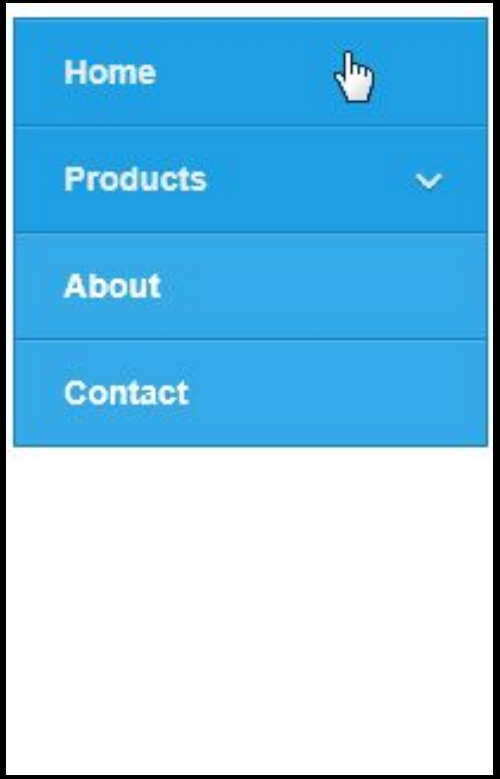
(and why is it called that?)

Remember Netscape?



- First appeared in 1995
- Originally called “Mocha”, then “LiveScript”, then “JavaScript”
- With HTML + CSS, JS is essential in all web development

From Static to Dynamic



- JS allows web pages to do more than just “sit there”
- You can animate, calculate, etc. - you can do it all!
- It is a bridge between “design” and “development”

Java is NOT JavaScript!

Java

```
class HelloWorldApp {
    public static void
     main(String [] args) {
         System.out.println(
     "Hello World!");
     }
}
```

JavaScript

```
var HelloWorldApp =
function() {
     console.log(
     "Hello World!");
}
```

JavaScript's Basic Syntax

var - defines a variable

; - terminator

"word" - string creator

function() - does something

{ } - block notation

. - dot notation

LET'S CODE!

(First exercise….)

Let’s run through a simple tutorial!

Go to www.javascript.com/try and do the quick 15-minute tutorial!

❑ Finished with the tutorial?

You’re ready to move on to the next step!

In this course you will learn

- ~~Basic syntax of JavaScript~~
- **Variables** and **Functions**
- **Conditional statements** (if, else, else if)
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Variables!

(A little bit of old-school algebra)

What are variables?

Syntax:

```
var price1 = 5;
var price2 = 6;
var total = price1 + price2;
```

What is the value of total?

Variables are containers for storing data.

In JS, you must declare them, then define.

Variables can store...

Strings - “Hello, my name is Lee.”

Numbers - 40, 0.15

Boolean - true or false

Null - literally nothing

“Nothing” - undefined values

Functions - here we go...!

What's the difference between...?

`=` - assignment operator

```
var foo = 1
```

`==` - abstract equality comparison (value)

```
"1" == 1 => true
```

`===` - strict equality comparison (value & type)

```
"1" === 1 => false
```

LET'S CODE!

(Make your first variable)

Get the user's choice!

Assign a prompt method to the variable userChoice:

```
>> var userChoice = prompt("Do you
choose rock, paper or scissors?");
```

Why is this a terrible way to get user input?

Functions

(Make it do something…anything!)

What are functions?

Syntax:

```
var multiply = function(a,b){
   return a * b
};
multiply(2,4); ← What is the value?
```

Block of code that performs a task

In JS, you declare, define, CALL (invoke)

Syntax of a Function

Parameters - (a,b,c) - hypothetically what passes through the function

Arguments - real values of the parameters the function affects

Block - {...} - the function's operational code

Return - the output of the function

LET'S CODE!

(Make your first function)

Get the computer's choice!

Assign a Math random method to the variable computerChoice:

```
>> var computerChoice = Math.random();
```

What is Math in JavaScript?

How else can we get a random choice?

Recap of Variables and Functions

- ❑ Variables are JS containers for data
- ❑ Functions perform tasks in JS

You’re ready to move on to the next step!

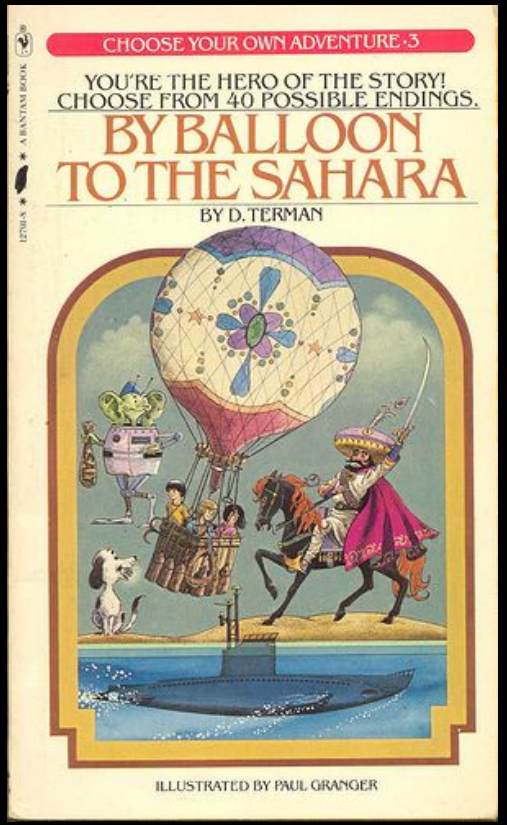
In this course you will learn

- ~~Basic syntax of JavaScript~~
- ~~Variables and Functions~~
- **Conditional statements** (if, elseif, else)
- Build a “**Rock, Paper, Scissors**” application

Conditional Statements

(If you want to move on, great! Or else…)

If, else, else if - conditionals!



Coding is all about logic!

You have to clearly define the rules of engagement.

Think of creating conditionals as building your own “Choose Your Own Adventure”

*This is a book

Conditional Syntax - if

if - if what's in the parameters is true, then a block of code will run.
If it's false, the code will not run.

```
if (hour < 18) {
  greeting = "Good day";
}
```

Conditional Syntax - else

else - what if you wanted the code to do something else if it's false?

```
if (hour < 18) {
   greeting = "Good day";
} else
   { greeting = “Go away.”;
}
```

Conditional Syntax - else if

What if another scenario comes up?

```
if (hour < 18)
   {greeting = "Good day";}
else if (hour < 9)
   {greeting = “OK day”;}
else {greeting = “Go away.”;}
   # THIS CODE IS WRONG - WHY? #
```

LET'S CODE!

(Build a conditional for your app)

Back to if, else, else if

```
if (computerChoice <= 0.33) {
    computerChoice = "rock";
} else if (computerChoice <= 0.66) {
    computerChoice = "paper";
} else {
    computerChoice = "scissors";
}
```

Recap of Conditionals

- ❑ if statements perform an action if the statement is true
- ❑ else statements perform an action if the statement is false
- ❑ else if statements perform an action if the first is false but the second is true

You're ready to move on to the next step!

In this course you will learn

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LET'S CODE!

(Now, the final "bit" of code...)

But...who won the game?

Let's create a function called compare

(okay if you need to use your GitHub here...)

```
var compare = function(userChoice, computerChoice) {
    if (userChoice  === computerChoice) {
        window.alert("The result is a tie!");
    } else if(userChoice === "rock") {
        if (computerChoice === "scissors") {
            window.alert("Rock wins!");
        } else {
            window.alert("Paper wins");
        }
    } else if(userChoice === "paper") {
        if(computerChoice === "rock") {
            window.alert("paper wins!");
        } else {
            window.alert("scissors wins!");
        }
    } else if(userChoice === "scissors") {
        if (computerChoice === "rock") {
            window.alert("Rock wins");
        } else {
            window.alert("scissors wins");
        }
    }
};
```

Some new functionality here

=== - “is exactly equal to”
Not to be confused with = (the assignment operator) or == (abstract equality comparison)

window.alert() - pop-up notification (enable them for now)

Now let’s call it in our app in HTML!

Add this into your HTML file:

```
<button class="button"
onclick="compare(userChoice,
computerChoice);">LET’S PLAY!</button>
```

Pictures of Kittens

Did it work? Great! No? Let’s figure it out!

Play around in the sandbox!

- "I want to play again!"
- "I want the game to congratulate me by name!"
- "Make it so I always win."
- "I don't want to have to click a button to play."

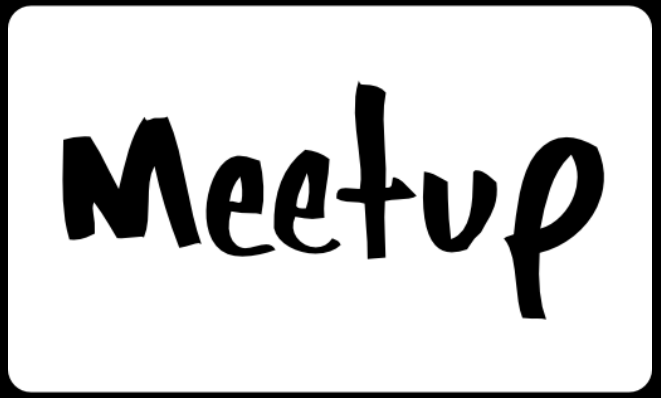
In this course you will learn

- ~~Basic syntax of JavaScript~~
- ~~Variables and Functions~~
- ~~Conditional statements (if, elseif, else)~~
- ~~Build a “Rock, Paper, Scissors” application~~

You did it!

You are now a JavaScript coder.
ACHIEVEMENT UNLOCKED!

Keep the party going!



Sign up via the

Learn to Code Seattle Meetup Group

Workshops Available

Web Development
Foundations in JavaScript

Classes begin in November! Email enrollment@galvanize.com for more information.

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About Web Development Immersive

- 24 Week Full-Time Program
- 91% Job Placement Rate within six months
- Average starting salary: $77,000 per annum
- Scholarships available for those who qualify

* Figures as of June 2016

Email enrollment@galvanize.com!

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Thank you on behalf of galvanize

Email **Lee Ngo** at
info@galvanize.com
or
Visit our website at
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Contributors to

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Thacher
@thachert1d
github.com/thachert1d
g21 Alumni - Seattle
Wants to solve diabetes with code.

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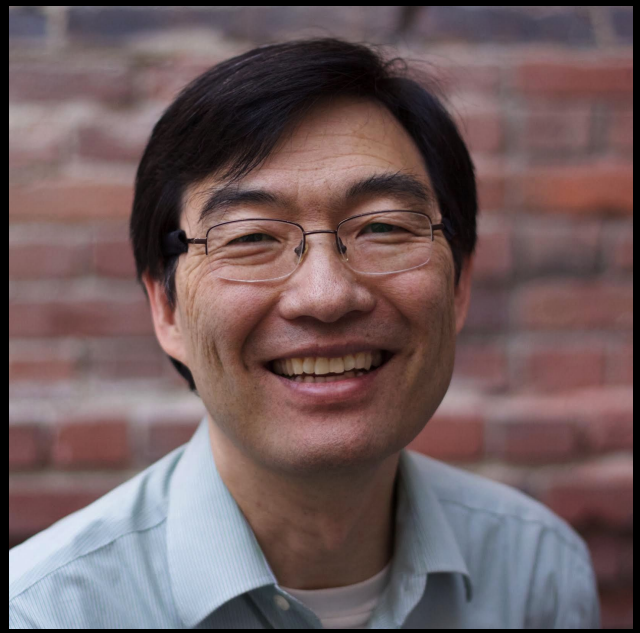

Michael Park
that.michael.park@gmail.com
g28 Alumni - Seattle

Michael started programming back when punched cards were a thing.

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Michael Chen

github.com/mikeechen

g34 Student - Seattle

Thinks musicals are awesome.

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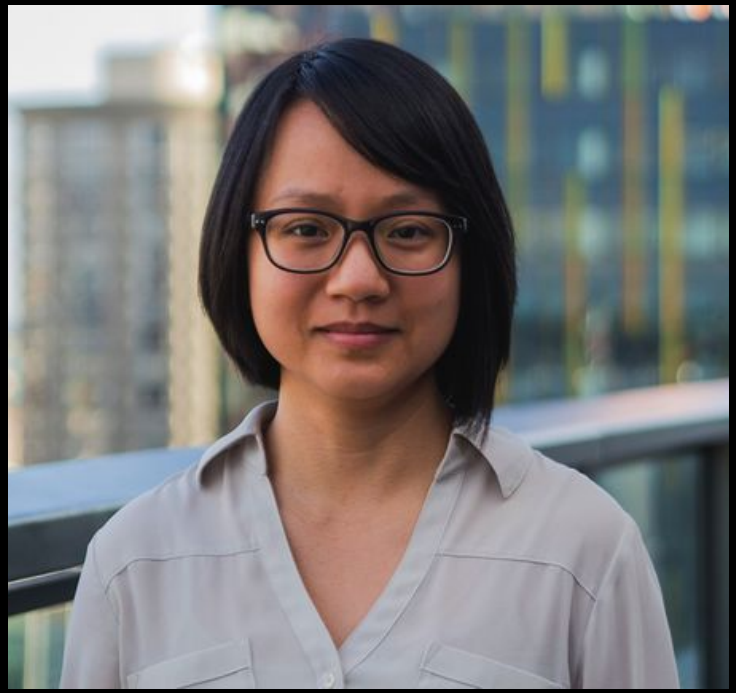

Hien Dang

github.com/hienpd

g28 student - Seattle

Once a non-profit marketing professional, Hien knows kung-fu (for realsies!).

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Graham McBain

@grahammcbain

g3 Alumni - Denver

Director of Marketing for SecureSet.

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Tyler Miller

github.com/Voxelsdev

g34 Student - Seattle

“I like to end arguments … with a semicolon.”

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Jesse Seligman

github.com/jesseseligman

g28 Alumni - Seattle

Can do a bunch of juggling tricks.

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Jake Bell

github.com/jakebrbell

g28 Alumni - Seattle

Once interned at

The White House.

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John Carney

github.com/jcquery

g28 Student - Seattle

Has eaten live octopus more than once; does not recommend.

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Bryan Brophy

github.com/brybrophy

g28 Alumni - Seattle

He has showered in the locker rooms of the Denver Broncos and the San Antonio Spurs.

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Lee Ngo

@LeePNgo

Self-taught in code (took way too long)

Into Frank Herbert's *Dune*, but only in video game format.

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Jamieson Bates

linkedin.com/in/jamiebbates

g40 Student - Seattle

Worked for two years in "frontier" Montana as political researcher.

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Brian Lee

g40 Student - Seattle

Once aspired to be a wartime photojournalist.

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Saralyn Ogden

github.com/SaralynOgden

g34 Student - Seattle

Only has eight pairs of socks.

UPDATED: Has more.

Learn to Code Contributor

Maddie Huish

github.com/madeleinehuish

g34 Student - Seattle

On a student visa from the planet Venus.

End Slide

[Presentation ends before this one!]