React.js Kickoff

Eve Porcello

eve@moonhighway.com
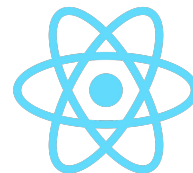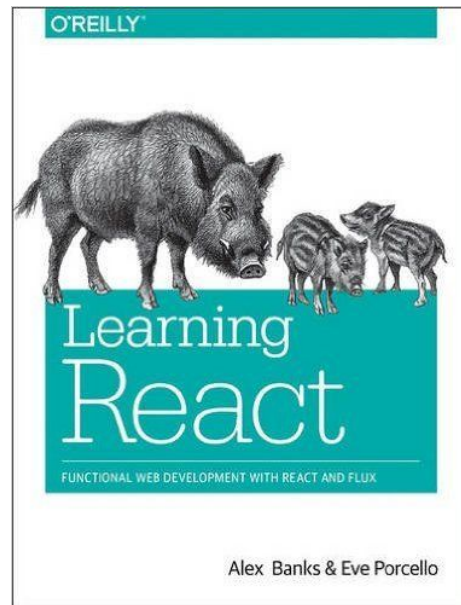linkedin.com/in/eveporcello
@eveporcello

Instructor – Eve Porcello

- Learn React.js
- Up and Running with ES6
- Learn Webpack

Coming Soon:
- Learn React (new syntax)
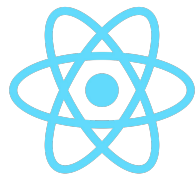- React Essential Training

Instructor – Eve Porcello

Tahoe City, CA
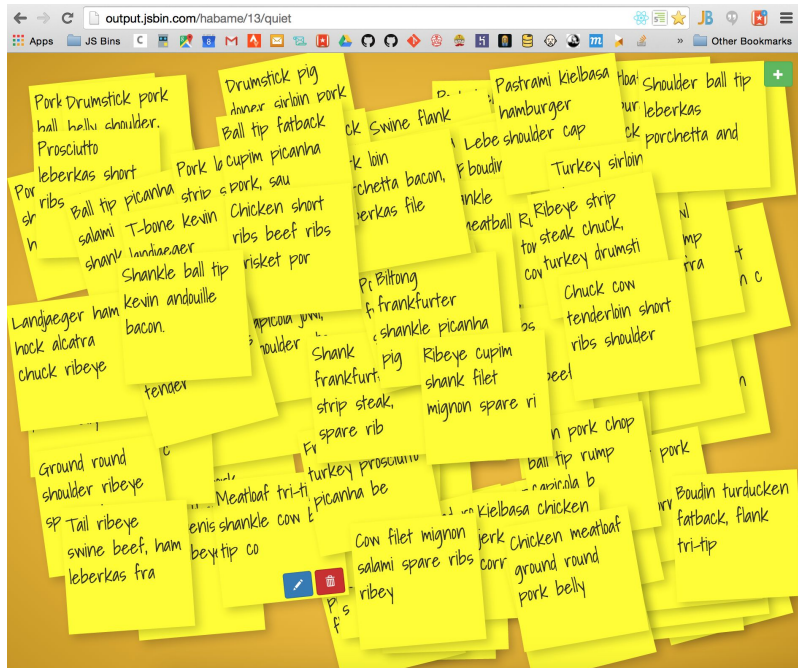
Agenda

Topics

- Introducing React

- ES6 Upgrade

- Functional JavaScript

- Introducing JSX

- Properties

- Events, State, Refs

- Nesting Components

Tomorrow

- React Router

- Flux

- Redux

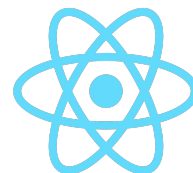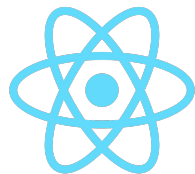- Next Steps with React
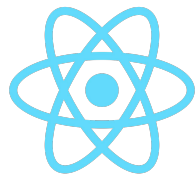
What We Will Build

Hello World
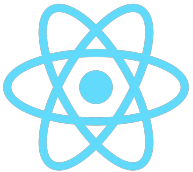
- Your Name?

- Your Day to Day work?
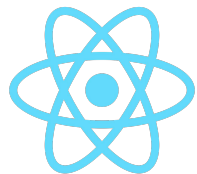
- Goals?

What is React

- JS library for building user interfaces
- Created at Facebook
- Large scale, single page applications
- High speed virtual DOM

React !== Framework

Where do we use React

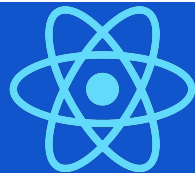# Where do we use React

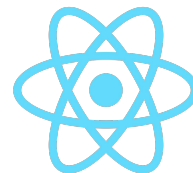| Model	Controller
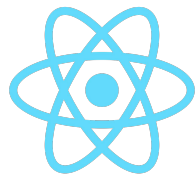
Where do we use React

Store

React

Dispatcher

Action

How many mutations?

- Kirkwood
- Squaw Valley

→

- Kirkwood
- Squaw Valley
- Alpine Meadows
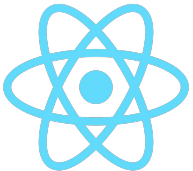
How many mutations?
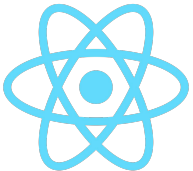
- Kirkwood
- Squaw Valley

→

- Whistler
- Revelstoke
- Banff

Why React is So Fast

- JS Objects are faster than DOM Objects
- The React Virtual DOM is a JS Object
- Never reads from 'real' DOM
- Only writes to real DOM if needed
- Efficiently handles DOM updates

JavaScript DOM Updates
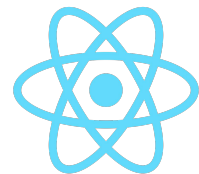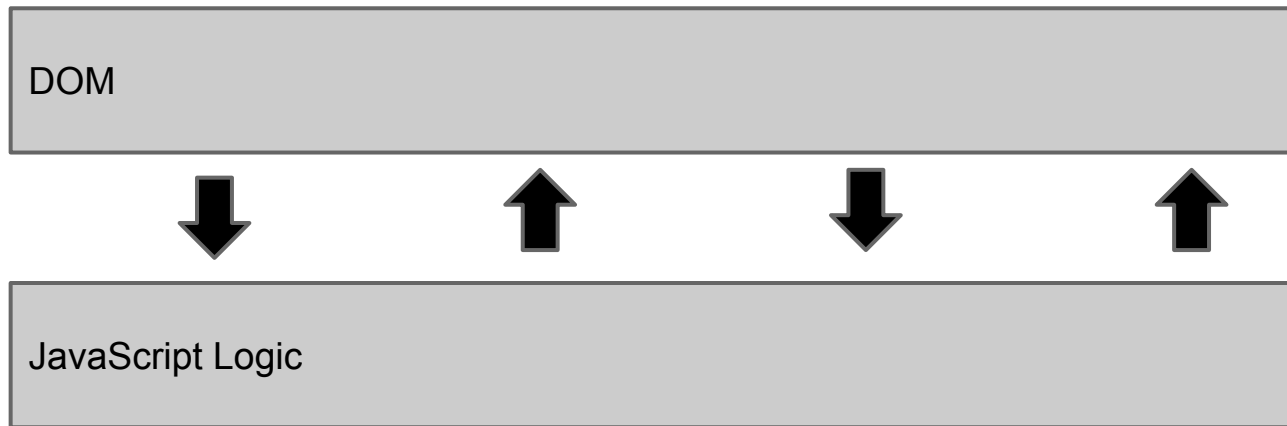
Other Frameworks
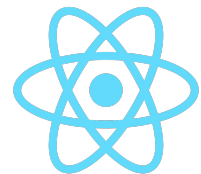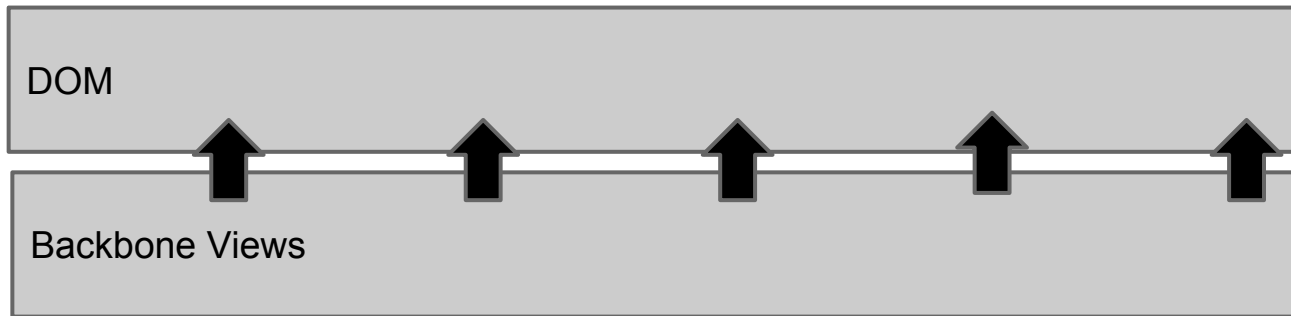
React
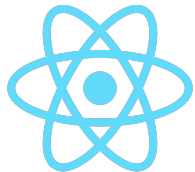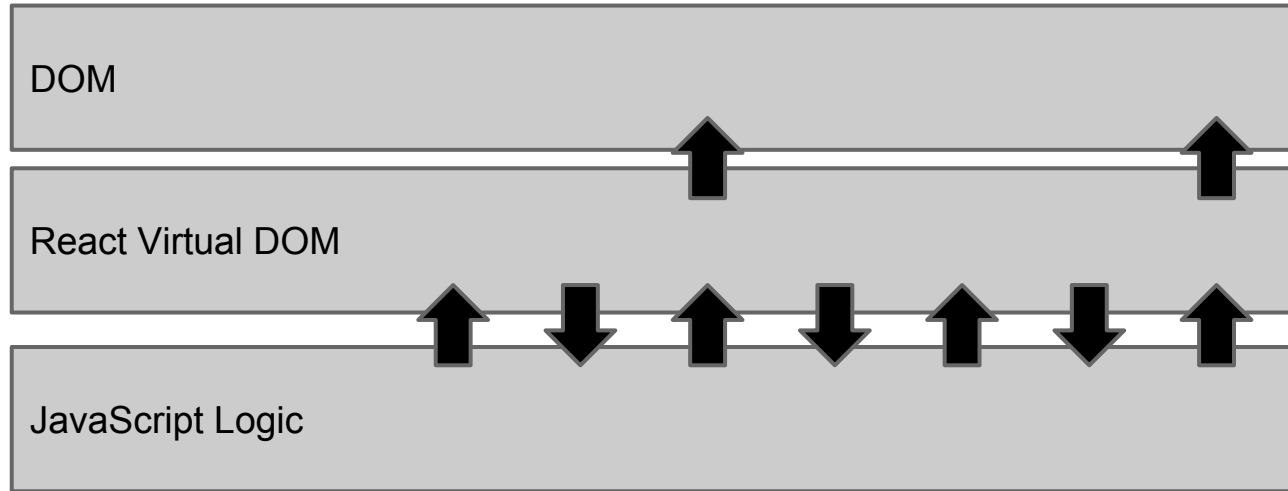
Chrome React Tools
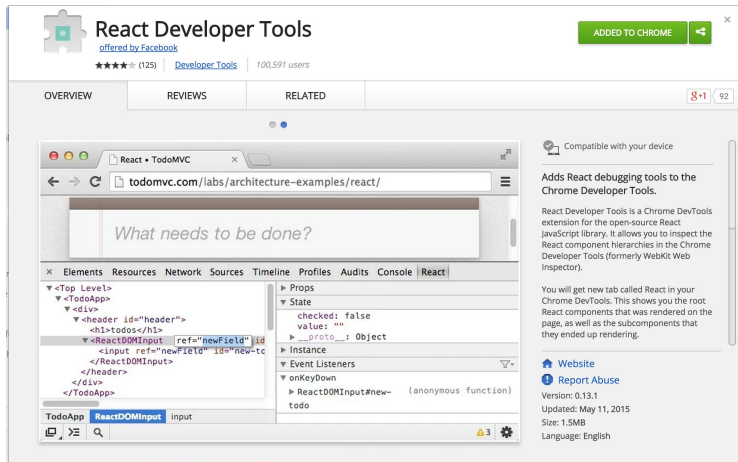
React Developer Tools
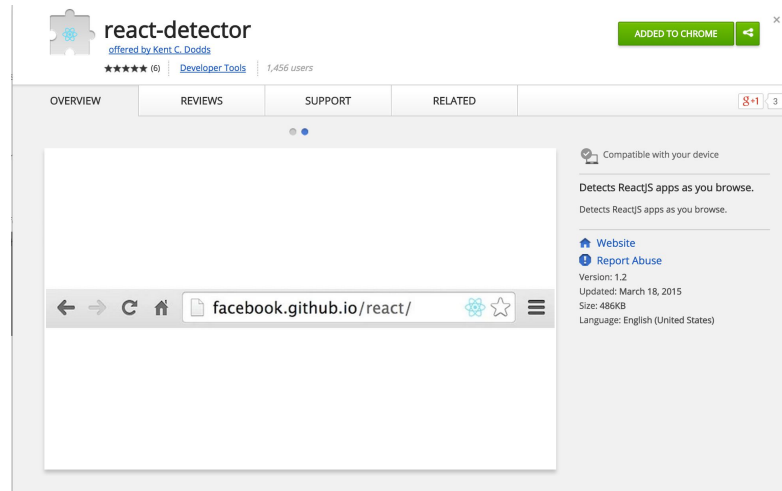
react-detector
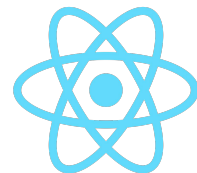
Setup

- Add React Developer Tools
- Add react-detector
- Make sure node is installed
  - $ node -v
- Make sure you have a code editor of some sort
  - Webstorm, Atom, Sublime, etc. etc.
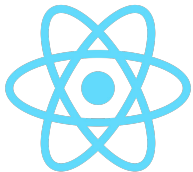
Getting the Files

- Course files are hosted on GitHub.
- Files

  www.github.com/eveporcello/react-intro

  ```
  $ git clone https://github.com/eveporcello/react-intro.git
  ```

JSX

React Element

React.createElement(IngredientsList, {list: [...]});

JSX <IngredientsList list= {[...]} />

JavaScript History

- **Origins**
  - JavaScript started at Netscape and was adopted by Microsoft as Jscript.
- **A Need for Standards**
  - ECMAScript represents the standards for JS browser implementations.
- **AJAX Revolution**
  - AJAX allowed for JavaScript to make server side requests.
- **The Future**
  - Continued explosion of JS Frameworks and isomorphic use

JS

ECMAScript

- Version 1: 1997
- Version 2: 1998
- Version 3: 1999
- Version 4: n/a
- Version 5: 2009
- Version 5.1: 2011
- Version 6: 2015

JS

What's New in ES6

- Let, Const keywords
- String Templates
- Spread Operator
- Arrow Functions
- Default Function Params
- Destructuring
- Classes
- Modules

ES6

ES6

- The latest version of ES6
- New Ways of:
    - Writing functions
    - Handling Scope
    - Dealing with Objects & Arrays

ES6

… ES7?

- Exponentiation Operator
- Async Functions
- Rest and Spread for Objects
- Decorators

ES7

Functional JavaScript

.map

.reduce

Lambda Calculus

What is Functional Programming

- Using functions to transform values into units of abstraction
- Minimize observable state modification
- A machine for transforming data
- Not about eliminating state change - reducing occurrences of mutation to smallest possible

JS Paradigms

- Imperative
- Prototypal, object-oriented
- Functional

Functional vs. Object Oriented

- OO: Packaging data with operations that manipulate data
- OO: Best for simulating people
- FP: Best for handling data about people

Functional Programming

- Immutability
- Pure functions
- Data transformations
- Higher Order Functions
- Recursion
- Composition

Thanks for Attending

- Files

  www.github.com/eveporcello/react-intro

Eve Porcello

eve@moonhighway.com

linkedin.com/in/eveporcello