

Front End Frameworks

As you work in front end JS, you find some common tasks

- (re)generating HTML based on variables
- Making service calls
- Reporting errors to the user
- Repeating portions of output
- Dealing with browser/version differences

Common Libraries

Libraries package some of this common code in a useful interface

- jQuery (DOM searching/manipulation, service calls, browser diffs)
- Moustache, HandlebarsJS (templating)
- A bajillion others

Libraries don't tend to care HOW you use the options they expose

Frameworks

A "Framework" doesn't just provide an interface to common code

Make it easy and convenient to follow a particular organization of code, user flow, and data flow

A framework is "opinionated"

- Helpful to do things the way the framework wants
- Problems to do something they don't want

Modern Libraries/Frameworks

People may often argue over whether a package is a library or a framework

What matters is the impact, not the title

- Angular (Angular vs AngularJS)
- React
- Vue
- Backbone
- Ember
- Meteor

Which library/framework is the best?


It Depends

- Strengths, Weaknesses - which apply to this task?
- No single best

"What is the best language?"

- If there was one clear best there wouldn't be so many

Why React?

- "View" only - unopinionated about the rest
 - Makes it more flexible
- React is Declarative
 - Makes it less complex to read/change
- React maps closely to HTML output
- React components map closely to JS functions
 - Same best practices
 - Non-React skills increase React skills
 - React skills are useful even without React
- Also very popular right now (most? )
 - Means helps with jobs

How does React work

Imagine a TODO list backed by services

- state is maintained in some JS variables
- When the state changes, you rewrite the HTML
- Ideally, you only change the HTML if there is a REAL change

React makes this easy

JSX

- **JSX** is a syntax that LOOKS like HTML
 - actually transpiles to JS
- React is made of "components"
 - Look like HTML elements
 - Functions that output an HTML element
- Only presentation logic should be in JSX
 - still separating concerns
 - even if it feels like we aren't