Rich apps w/ components

Jquery

Bootstrap

ExtJS

Ember

Wijmo

Jqueryui

Kendo

Knockout

Angular (directives)

Some are component libs, others are full-fledged frameworks

Why React over other options?

Fast and scalable to complex UI’s

Composable components model

Very pluggable into other frameworks

It’s just a view layer

Battle proven

Simple to learn

Innovations

JSX - markup is written in javascript

Virtual DOM - minimizes updates

Isomorphic rendering - rendering on both client and server

Doesn’t need the native DOM to render

Unidirectional dataflow through dispatcher simplifies reasoning about flows

Purposefully ignores / questions many existing best practices

HTML should be a projection of app state

No data is stored in DOM

DOM is simply a reflection of state of app

JS / HTML belong in same file (no separation of concerns)

There’s no strong typing between js and HTML, and benefits of keeping them close together are convincing.

No 2-way data-binding

Unlike Angular / Knockout

Data stores are updated in a simple manner

Inline styles are good

Minimize bloated stylesheets that are risky to maintain given distance between them and the elements they impact

Technology

There’s a large buy-in required to make a react app

Node.js for SS javascript

Browserify to expose node packages to client

React components

React router - client-side routing

Flux

Gulp

Node

Run SS javascript using Google V8 engine

NPM pulls down libs / dependencies required for the app

CommonJS

Similar to AMD

Browserify

Bundles node modules to be used in the browser.

Allows SS to be used in a browser

By default, bundles all into a single file

Useful for minimizing number of HTTP requests

React

A very narrowly scoped framework

A small focused view engine

Supports rendering on both client and server

Lack of dependency on browser DOM supports development of isomorphic apps

React router

A separate part of react

Separate from core react

Similar to ember

Flux

Branding for implementation of unidirectional data flow pattern

Delorean, fluxor, fluxy and reflux

Avoids MVC pattern

Makes large apps easier to reason about.

Gulp

Task runner

Rich plugin system

Fast because it’s stream-based, pipes and filters

Runs in memory as opposed to grunt

Watchify

Rebuilds / bundles as changes are detected

Streamlines development, but not required

Testing

Jest

Wrapper over Jasmine test framework

Useful for testing react components

Not required, could use Jasmine, Mocha, QUnit

ES6 vs ES5

Can use babel to transform ES6 ro ES5

Versions

React 13.3

Flux 2.0.3

Terms

Isomorphic app

App that can run on both client and server

Browserify

Gulp

Nodejs

Rapid feedback

React router

Unidirectional data flows