

The Starter Kit Manifesto

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Software Architect



Author



Independent



Speaker / Coach



Fatigue



Fatigue Solutions



1. Ignore
2. Comprehensive framework
3. Starter Kit

#FirstWorldProblems



CANT KEEP UP



**WITH ALL THE AWESOME FREE
JAVASCRIPT LIBS**

[dcodegenerator.net](https://www.dcodegenerator.net)



PHONE KEEPS RINGING



**WITH RECRUITERS BEGGING ME TO
INTERVIEW**

memegenerator.net



Too. Many. Decisions.



So. Many. Decisions.

Editor

- Which one?
- Which plugins?
- Use built in terminal?
- Editor config

Module format

- ES6 Modules, CommonJS...

HTML generation

- Minify?
- Use plugin?
- Inject prod only concerns?
- Templating language?

Transpiling

- Native ES or diff language?
- Use experimental features?
- Which plugins?
- Production vs dev config

Bundler

- Webpack, Browserify, Rollup...

Linting

- Which linter?
- Enable which rules?
- Warning or error?
- Which plugins?
- Use a preset?

Testing

- Framework?
- Assertion Library?
- Helpers?
- Test file location?
- File naming?
- What environment?
- Mocking?
- Code Coverage
- Continuous Integration

Project structure

- By file type or feature?
- Centralize API?
- Allow Inline JS?
- Extract to POJOs?

HTTP

- Library
- Mock schema format
- Mock data generation
- Mock server

Production build

- Minification
- Sourcemaps
- Bundle splitting
- Cache busting
- Error logging

Automated Deployment



Overwhelmed?



Your team *needs* a JavaScript
starter kit.



```
while(fatigued) {  
    continueEnhancingStarterKit();  
}
```



A yellow square with the letters 'JS' in a large, bold, dark grey font.

JS

Why a Starter Kit?

Codifies

- Decisions
- Best practices
- Lessons learned

Encourages consistency

Avoids forgetting important details

Increases quality

- Doing the “right” thing is the easy thing

Avoids repeating work



Today's list of “best practices” is
too long for any individual to
track.

Create a starter kit that does it for
you.



Synonyms

X === Y

Starter Kit

JavaScript Development Environment

Boilerplate

Seed

Starter Project

Scaffold

Generator



Who Is This Talk For?

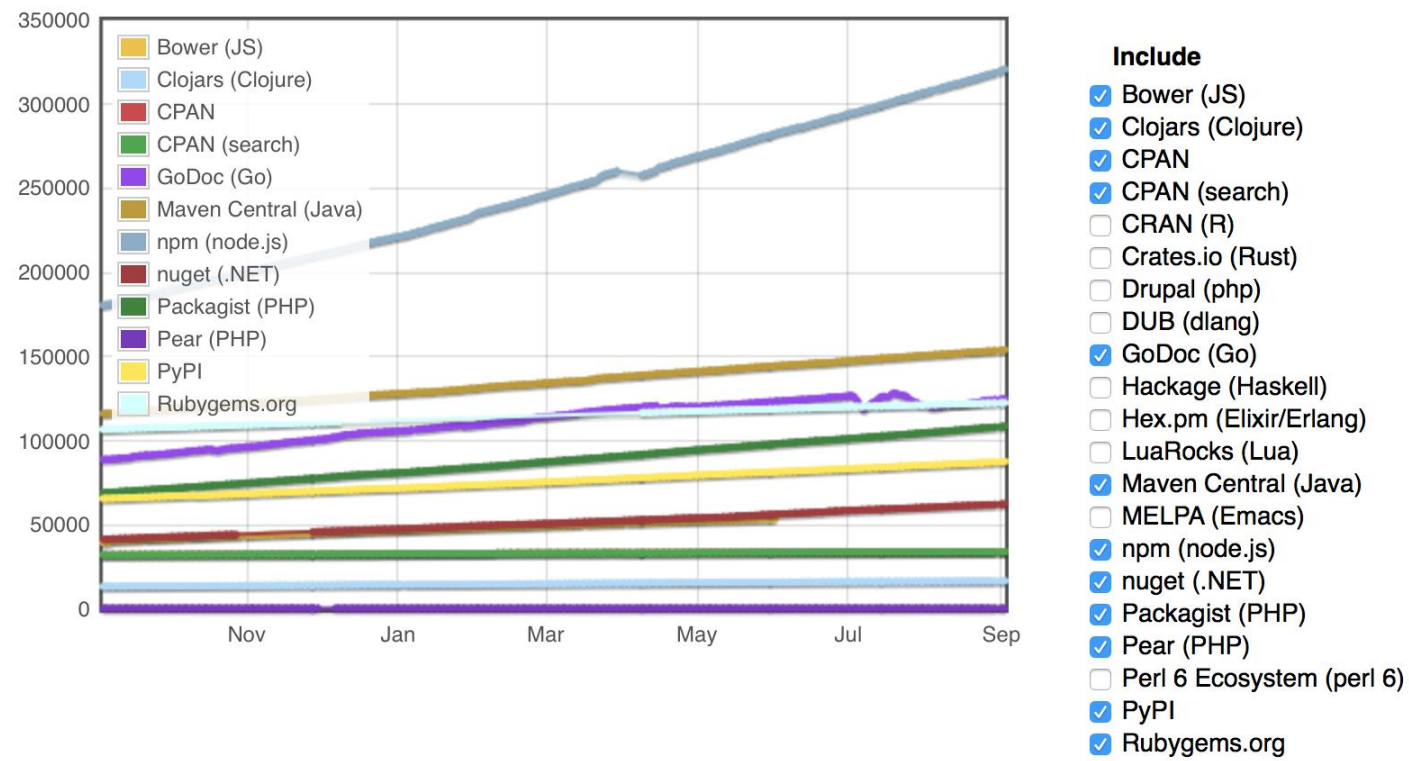


“Any application that *can* be written in JavaScript, *will* eventually be written in JavaScript.”

Atwood's Law



Module Counts



time period ☐ all time ☒ last year ☐ last 90 days ☐ last 30 days ☐ last 7 days

	Aug 27	Aug 28	Aug 29	Aug 30	Aug 31	Sep 1	Sep 2	Avg Growth
<u>Bower (JS)</u>								37/day
<u>Clojars (Clojure)</u>	16764	16769	16789		16821	16828	16837	12/day
<u>CPAN</u>	34109	34107	34108		34116	34119	34123	2/day
<u>CPAN (search)</u>	34109	34107	34108		34116	34120	34125	3/day
<u>CRAN (R)</u>	9034	9035	9044		9062	9069	9078	7/day
<u>Crates.io (Rust)</u>	5851	5862	5880		5902	5912	5920	11/day
<u>Drupal (php)</u>	35258	35261	35265		35281	35303	35316	10/day
<u>DUB (dlang)</u>	837	838	839		841	841	841	1/day
<u>GoDoc (Go)</u>	124396	124377	124497		124651	124969	125024	105/day
<u>Hackage (Haskell)</u>	10169	10171	10173		10177	10189	10191	4/day



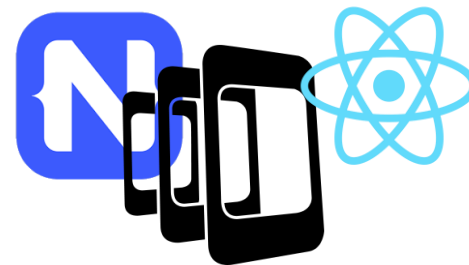
JavaScript Is Everywhere



Web



Server



Mobile



Desktop



This Talk Is For JS Developers



Web

Server

Mobile

Desktop



Who Doesn't Need a Starter Kit?



Highly opinionated and comprehensive frameworks



React

Node

Angular

Ember

Opinion



Boilerplate

Save time

Proven

Full-featured

Build your own

Freedom

Perfect fit for your team

No unnecessary complexity

Understand it

Easier to change



A Starter Kit is Automated Checklist



THE NEW YORK TIMES BESTSELLER

THE CHECKLIST MANIFESTO

HOW TO GET THINGS RIGHT

PICADOR

ATUL GAWANDE

BESTSELLING AUTHOR OF *BETTER* AND *COMPLICATIONS*

Doctors use checklists



THE NEW YORK TIMES BESTSELLER

THE CHECKLIST MANIFESTO

HOW TO GET THINGS RIGHT

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BESTSELLING AUTHOR OF *BETTER* AND *COMPLICATIONS*

We think we can remember all the steps.

We can't.



THE NEW YORK TIMES BESTSELLER

THE CHECKLIST MANIFESTO

HOW TO GET THINGS RIGHT

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ATUL GAWANDE

BESTSELLING AUTHOR OF *BETTER* AND *COMPLICATIONS*

Dramatic Results

10 day line-infection rate
Fell from 11% to 0%

Checklist prevented:

43 infections

8 deaths

\$2 million



THE NEW YORK TIMES BESTSELLER

THE CHECKLIST MANIFESTO

HOW TO GET THINGS RIGHT

PICADOR

ATUL GAWANDE

BESTSELLING AUTHOR OF *BETTER* AND *COMPLICATIONS*

Doctors know what to do,
but **it's easy to overlook a step.**



THE NEW YORK TIMES BESTSELLER

THE CHECKLIST MANIFESTO

HOW TO GET THINGS RIGHT

PICADOR

ATUL GAWANDE

BESTSELLING AUTHOR OF *BETTER* AND *COMPLICATIONS*

Developers



~~Doctors~~ know what to do,
but it's easy to overlook a step.



A starter kit is a living, automated, and interactive checklist.



What Belongs in Your Starter Kit?

Package Management

Bundling

Minification

Sourcemaps

Transpiling

Dynamic HTML Generation

Centralized HTTP

Mock API framework

Component libraries

Development Webserver

Linting

Automated testing

Continuous Integration

Automated build

Automated deployment

Working example app



A bright yellow lightning bolt strikes down the center of the image, with smaller, fainter bolts branching out from the main one. The background is solid black.

LIGHTNING ROUND





THE PARADOX OF CHOICE

WHY MORE IS LESS BARRY SCHWARTZ

HOW THE CULTURE OF ABUNDANCE ROBS US OF SATISFACTION



"A revolutionary and beautifully reasoned book about the promiscuous amount of choice that renders the consumer helpless. A must read."

—Martin Seligman, author of *Authentic Happiness*

P.S.
INSIGHTS,
INTERVIEWS
& MORE...



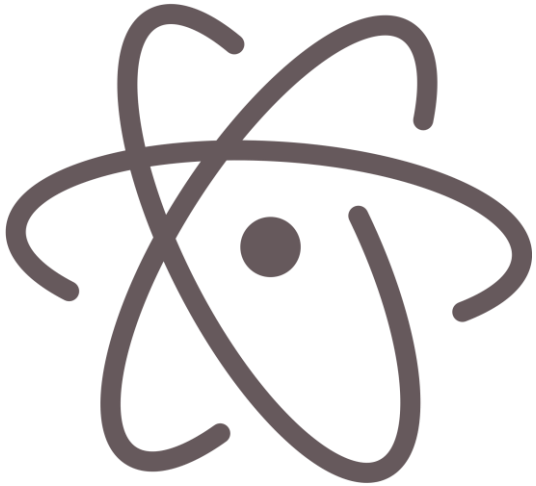
Strong opinions are very
useful to others.

Those who were undecided or
ambivalent can just adopt your
stance.

But those who disagree can
solidify their stance by arguing
against yours...

Derek Sivers





Atom



WebStorm



Brackets



VSCode

Step 1: Pick an Editor and Configuration



EditorConfig

What is EditorConfig?

Example File

File Location

File Format Details

Download a Plugin

Contributing

Blog

Project Page
on GitHub



Follow Us
on Twitter



Tweet

G+

626

What is EditorConfig?

EditorConfig helps developers define and maintain consistent coding styles between different editors and IDEs. The EditorConfig project consists of a **file format** for defining coding styles and a collection of **text editor plugins** that enable editors to read the file format and adhere to defined styles. EditorConfig files are easily readable and they work nicely with version control systems.

What's an EditorConfig file look like?

Example file

Below is an example `.editorconfig` file setting end-of-line and indentation styles for Python and JavaScript files.

```
# EditorConfig is awesome:  
http://EditorConfig.org  
  
# top-most EditorConfig file
```

Step 1: Pick an Editor and Configuration



Bower



npm



JSPM



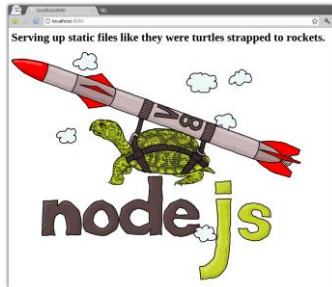
Jam

Jam



volo

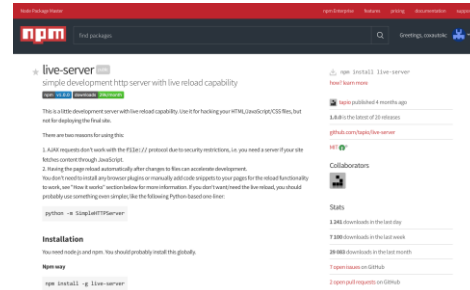
Step 2: Pick a Package Manager



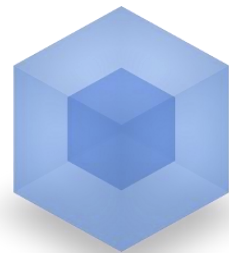
http-server

budō

budo



live-server



webpack
MODULE BUNDLER

Webpack dev server

express

Express



Browsersync

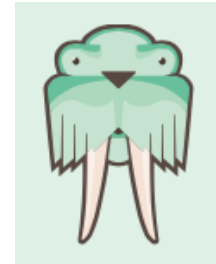
Step 3: Pick a Development Webservers



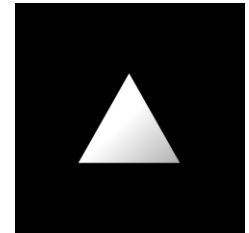
localtunnel

ngrok

ngrok



Surge



now

Step 4: Pick a Way to Share WIP



Grunt



Gulp



npm Scripts

Step 5: Choose an Automation Approach



Babel



TypeScript



Elm

Step 6: Pick a Transpiler

5 Module Formats

IIFE

Asynchronous Module
Definition
(AMD)

CommonJS
(CJS)

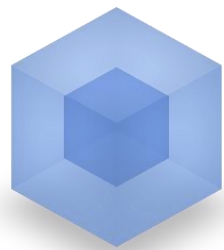
Universal Module
Definition
(UMD)

ES6 Modules

Step 7: Pick a Module Format



Browserify



webpack
MODULE BUNDLER

Webpack



Rollup



JSPM

Step 8: Pick a Bundler



Step 9: Pick a Linter

Unit Testing Decisions

1

Framework

2

Assertion Library

3

Helper Libraries

4

Where to run tests

5

Where to place tests

6

When to run tests

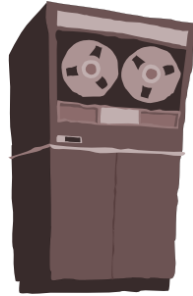
It's Like Choosing a Gym



The important part is showing up.



Right Answer



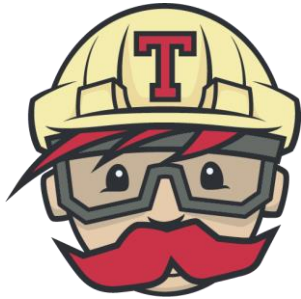
Any of these!

Wrong Answer

Woah, decision fatigue!

I'll just keep coding
and praying.





Travis



Appveyor



Jenkins



CircleCI



Semaphore



SnapCI

Step 11: Choose a CI Server

HTTP Call Approaches

Node

http
request

Browser

XMLHttpRequest
jQuery
Fetch

Node & Browser

isomorphic-fetch
xhr
SuperAgent
Axios

json-schema-faker

SamplesCommunity

Star370

faker.jschance.jsrandexp.js

JSON Schema Faker combines [JSON Schema](#) standard with fake data generators, allowing users to generate fake data that conform to the schema.

This application is built using [json-schema-faker npm module version 0.3.6](#) built with [browserify](#).

JSON Schema

```
1 {
2   "type": "array",
3   "minItems": 100,
4   "maxItems": 200,
5   "items": {
6     "type": "integer"
7   }
8 }
```

Sample output

```
1 [
2   35148542,
3   -37138934,
4   -6267495,
5   78032497,
6   -59641118,
7   2727993,
8   -72491060,
9   -836538,
10  49036025,
11  46357723,
12  67507885,
13  -67953268,
14  -18019199,
15  -56865883,
16  -69997617,
17  -41304637,
18  10186868
```

Generate sample

Save

Step 13: Choose an HTTP Mocking Approach

“I’ll just slap this JS in a script tag.”

- Some developer you know. But not you. Right? 😊

Why a Demo App?

Examples help.

The Path To Production



```
graph LR; A[npm start] --> B[npm run build]; B --> C[npm run deploy];
```

npm start

npm run build

npm run deploy

Step 15: Automated Build and Deploy

Demo



GitHub repository page for **coryhouse / react-slingshot**.

Repository statistics: 470 commits, 16 branches, 13 releases, 47 contributors, MIT license.

Branch: master | New pull request | Create new file | Upload files | Find file | Clone or download

Latest commit: f727196 an hour ago

File	Commit Message	Time Ago
.github	Create ISSUE_TEMPLATE.md	6 months ago
docs	Resolve merge conflict	a day ago
src	Including suggested simplification for configureStore.	19 hours ago
tools	refactor based on @coryhouse's suggestions.	a day ago
.babelrc	Update babel and use babel-preset-latest.	3 months ago
.editorconfig	Initial Release	11 months ago
.eslintrc	Use "babel-eslint" as parser for ESLint	26 days ago
.gitignore	Ignoring npm-debug logs with time stamp npm-debug.log.xxxxx	3 months ago
.istanbul.yml	Omit .spec files from code coverage stats and reporting	4 months ago
.npmrc	Put best practice in place to use "save exact" for npm packages.	11 months ago
.travis.yml	Added yarn.	15 days ago



Challenge



Send a meeting invite to your team.

- Would we benefit from a starter kit?
- What are our JS pain points?
- Would we benefit from a demo app?



PLURALSIGHT

Courses by Cory

Building a JavaScript Development Environment

by **Cory House**

 Beginner 5h 17m 09 Nov 2016



Building Applications with React and Redux in ES6

by **Cory House**

 Intermediate 6h 13m 20 May 2016



Building Applications with React and Flux

by **Cory House**

 Intermediate 5h 8m 12 Aug 2015



HTML5 Web Component Fundamentals


by **Cory House**

 Beginner 5h 3m 09 Jan 2015



Becoming an Outlier: Reprogramming the Developer Mind

by **Cory House**

 Intermediate 2h 33m 23 Apr 2014



Architecting Applications for the Real World in .NET

by **Cory House**

 Intermediate 2h 52m 07 Jan 2014



Clean Code: Writing Code for Humans

by **Cory House**

 Intermediate 3h 10m 07 Oct 2013



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