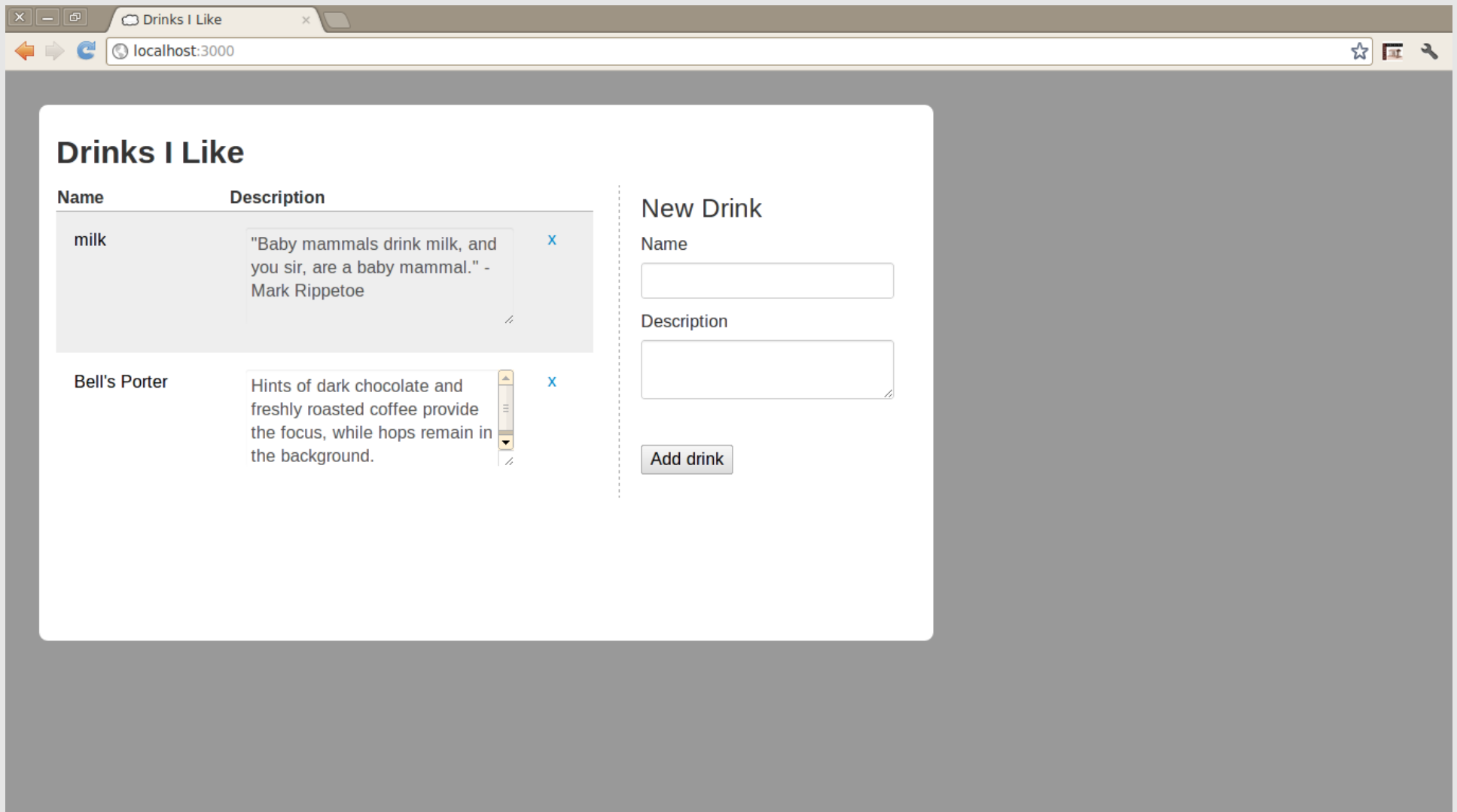
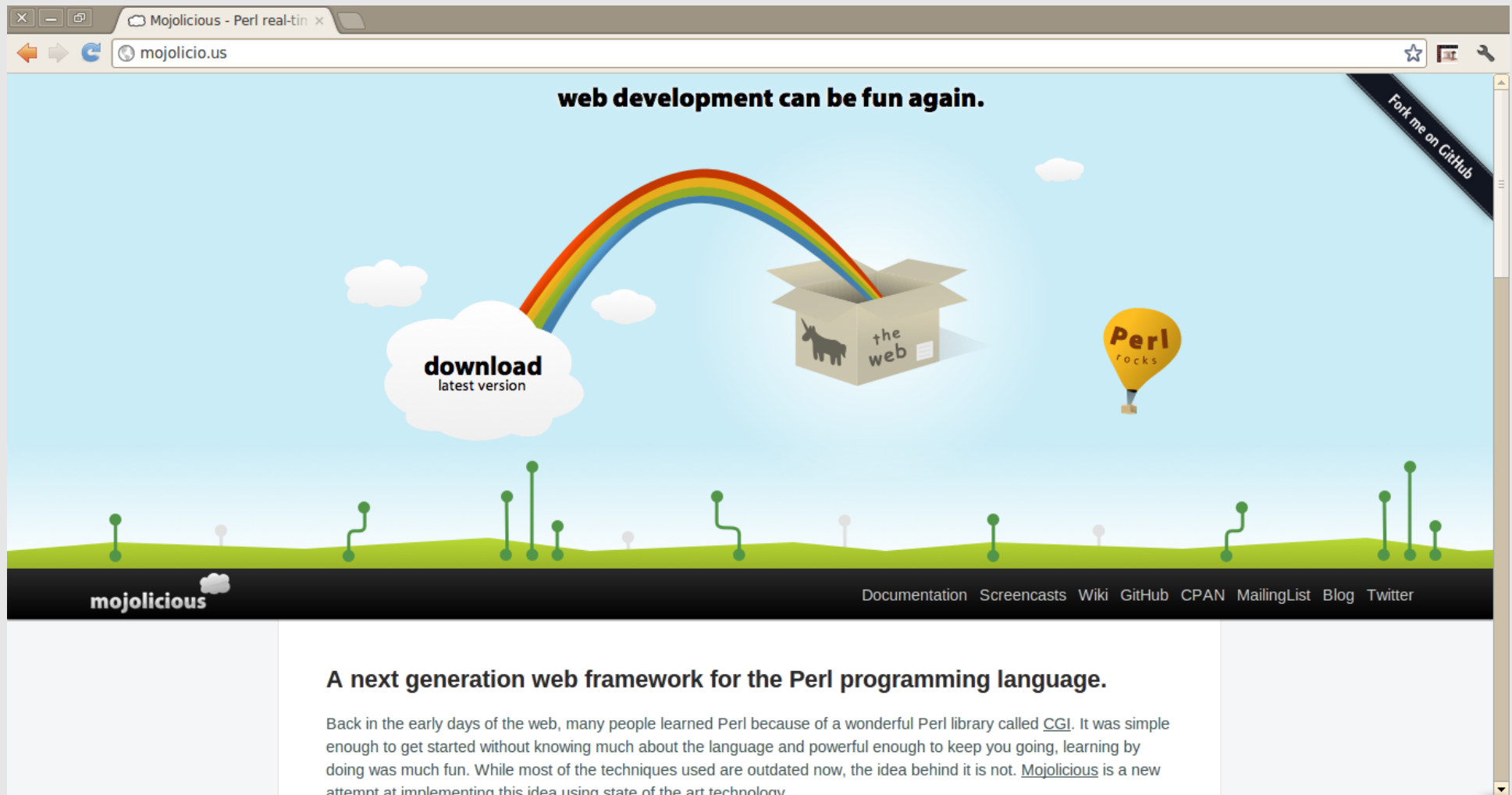


Single page webapps with
Mojolicious and Backbone.js

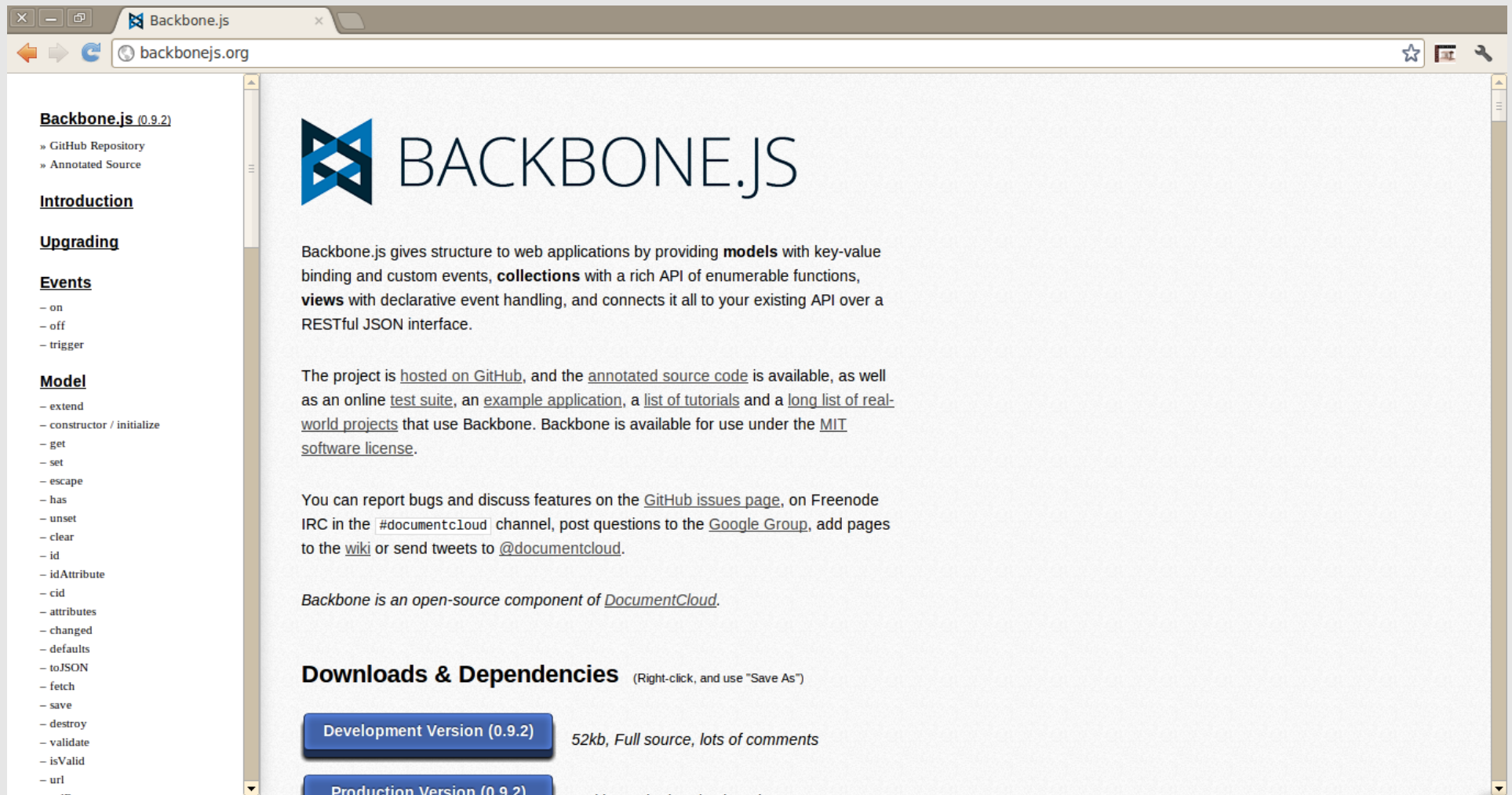
Here's the app...



Mojolicious, Backbone.js & Bootstrap



Mojolicious, Backbone.js & Bootstrap



The screenshot shows a web browser window with the address bar displaying "backbonejs.org". The page features the Backbone.js logo, which consists of a blue geometric shape resembling a stylized 'B' or a network node, followed by the text "BACKBONE.JS".

Backbone.js (0.9.2)

- » [GitHub Repository](#)
- » [Annotated Source](#)

Introduction

Upgrading

Events

- on
- off
- trigger

Model

- extend
- constructor / initialize
- get
- set
- escape
- has
- unset
- clear
- id
- idAttribute
- cid
- attributes
- changed
- defaults
- toJSON
- fetch
- save
- destroy
- validate
- isValid
- url

Backbone.js gives structure to web applications by providing **models** with key-value binding and custom events, **collections** with a rich API of enumerable functions, **views** with declarative event handling, and connects it all to your existing API over a RESTful JSON interface.

The project is [hosted on GitHub](#), and the [annotated source code](#) is available, as well as an online [test suite](#), an [example application](#), a [list of tutorials](#) and a [long list of real-world projects](#) that use Backbone. Backbone is available for use under the [MIT software license](#).

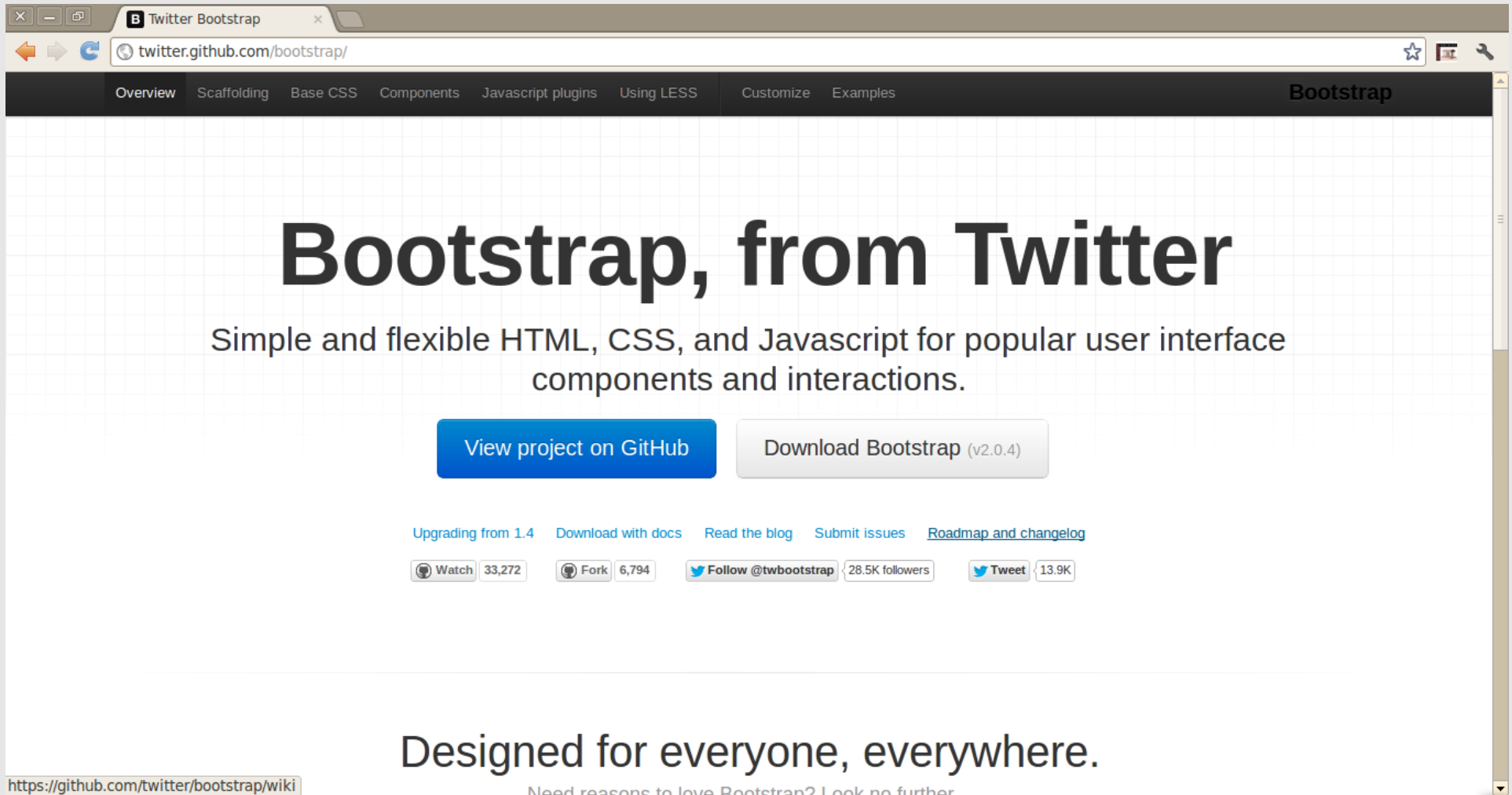
You can report bugs and discuss features on the [GitHub issues page](#), on Freenode IRC in the [#documentcloud](#) channel, post questions to the [Google Group](#), add pages to the [wiki](#) or send tweets to [@documentcloud](#).

Backbone is an open-source component of [DocumentCloud](#).

Downloads & Dependencies (Right-click, and use "Save As")

Version	Size / Description
Development Version (0.9.2)	52kb, Full source, lots of comments
Production Version (0.9.2)	

Mojolicious, Backbone.js & Bootstrap



A screenshot of a web browser displaying the Twitter Bootstrap GitHub repository page. The browser's address bar shows the URL `twitter.github.com/bootstrap/`. The page features a dark navigation bar with links for Overview, Scaffolding, Base CSS, Components, Javascript plugins, Using LESS, Customize, and Examples. The main content area has a light gray grid background and prominently displays the title "Bootstrap, from Twitter" in a large, bold, black font. Below the title is a subtitle: "Simple and flexible HTML, CSS, and Javascript for popular user interface components and interactions." Two large buttons are centered: a blue "View project on GitHub" button and a gray "Download Bootstrap (v2.0.4)" button. A row of links follows: "Upgrading from 1.4", "Download with docs", "Read the blog", "Submit issues", and "Roadmap and changelog". Below these are social and repository statistics: "Watch 33,272", "Fork 6,794", "Follow @twbootstrap 28.5K followers", and "Tweet 13.9K". At the bottom, the text "Designed for everyone, everywhere." is displayed, followed by a partially visible line "Need reasons to love Bootstrap? Look no further".

Twitter Bootstrap

twitter.github.com/bootstrap/

Overview Scaffolding Base CSS Components Javascript plugins Using LESS Customize Examples Bootstrap

Bootstrap, from Twitter

Simple and flexible HTML, CSS, and Javascript for popular user interface components and interactions.

[View project on GitHub](#) [Download Bootstrap \(v2.0.4\)](#)

[Upgrading from 1.4](#) [Download with docs](#) [Read the blog](#) [Submit issues](#) [Roadmap and changelog](#)

[Watch](#) 33,272 [Fork](#) 6,794 [Follow @twbootstrap](#) 28.5K followers [Tweet](#) 13.9K

Designed for everyone, everywhere.

Need reasons to love Bootstrap? Look no further.

<https://github.com/twitter/bootstrap/wiki>

REST

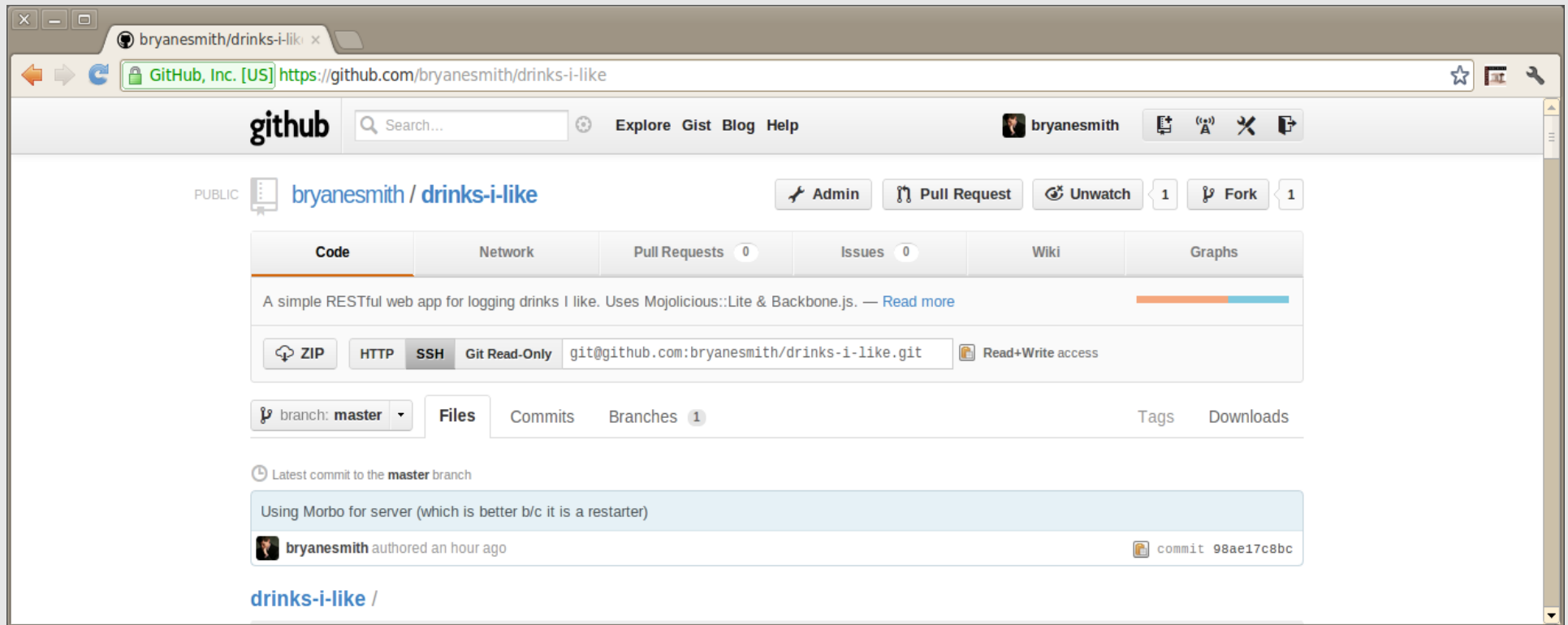
- Data formats (e.g., XML, JSON, YAML, etc.)
- HTTP method (“verbs”) + resource
 - POST -> CRUD
 - GET * -> CRUD
 - PUT * -> CRUD
 - DELETE * -> CRUD

* Should be idempotent

RESTful design

Method	Route
POST	/api/drink (JSON object in body)
GET	/api/drink/ (Return all drinks)
	/api/drink/:id (Return one drink)
PUT	/api/drink/:id (JSON obj in body)
DELETE	/api/drink/:id

Let's install from GitHub



```
git clone git@github.com:bryanessmith/drinks-i-like.git
```


Mojolicious

```
38 # - - - - -
39 # Routes
40 # - - - - -
41
42 # Home page
43 get '/' => \&handle_home;
44
45 # Add a drink
46 post '/api/drink' => \&handle_post_drink;
47
48 # Get all drinks
49 get '/api/drink' => \&handle_get_drinks;
50
51 # Get drink
52 get '/api/drink/:id' => \&handle_get_drink;
53
54 # Update a drink
55 put '/api/drink/:id' => \&handle_put_drink;
56
57 # Delete a drink
58 del '/api/drink/:id' => \&handle_delete_drink;
59 del '/api/drink' => \&handle_delete_drink;
60
61 app->start;
```

Backbone.js: Model, Collection, View & misc

public/js/library.js:

```
$(document).ready( function() {  
    ...  
} );
```

Backbone.js: Model, Collection, View & misc

```
var Drink = Backbone.Model.extend( {  
    urlRoot: '/api/drink'  
});
```

Backbone.js: Model, Collection, View & misc

```
var DrinkCollection = Backbone.Collection.extend({  
  model: Drink,  
  url: '/api/drink'  
});  
  
var drinks = new DrinkCollection();
```

Backbone.js: Model, Collection, View & misc

```
var DrinksView = Backbone.View.extend({  
  el: $('#drinks'),  
  templateId: '#drinks-template',  
  events: {  
    'click .remove-drink' : 'removeDrink',  
    'change .title' : 'updateTitle',  
    'change .description' : 'updateDescription'  
  },  
  ...  
});
```

Backbone.js: Model, Collection, **View** & misc

```
var DrinksView = Backbone.View.extend({  
  ...  
  initialize: function() {  
    // Bind events to collection  
    this.collection.bind('add', this.render, this);  
    this.collection.bind('remove', this.render, this);  
    // Grab template  
    this.template = $.template(this.templateId);  
    // Render  
    this.render();  
  },  
  ...  
});
```

Backbone.js: Model, Collection, **View** & misc

```
var DrinksView = Backbone.View.extend({  
  ...  
  render: function() {  
    var that = this;  
  
    $(this.el).find('td').remove();  
  
    // Render each drink  
    _(this.collection.models).each(function(drink) {  
      $.tmpl(that.template, drink.toJSON()).appendTo(that.el);  
    });  
  },  
  ...  
});
```

Backbone.js: Model, Collection, View & misc

- Add drink?

```
var drink = new Drink({title: title, description: desc });  
drink.save({wait: true});
```

- Update drink?

```
var drink.set(newValues);  
drink.save({wait: true});
```

- Delete drink?

```
drink.destroy({success: function(model, res) { coll.remove( drink ); }});
```

- Fetch drinks?

```
drink.fetch();
```


Backbone.js: Model, Collection, View & misc

```
// Grab drinks from server
```

```
drinks.fetch({  
  success: function() {  
    var drinksView = new DrinksView( { collection:  
drinks } );  
  }  
});
```

Backbone.js: Model, Collection, View & misc

```
// Handle add drink button
$('#add-drink').click(function () {
  // Create drink from form values
  var drink = new Drink({
    title: $('#add-title').val(),
    description: $('#add-description').val()
  });
  // Reset form
  $('#new-drink').each (function(){ this.reset(); });
  drink.save({wait: true});
  drink.fetch({
    success: function() { drinks.add(drink); }
  });
});
```

Awesome

- Asynchronous HTTP > page reload
- RESTful design keeps API simple
- Backbone.js makes it ~~easy~~ easier
- Bootstrap makes it pretty
- Mojolicious makes it fun

Needs improvement

- Delete should be idempotent
- Standard urls & Backbone.Router (History API)
- OO design improvements (e.g., fetching & helper functions should be part of view obj)
- More idiomatic Backbone.js

Resources

- [Mojolicious](#)
- [Backbone.js](#)
- [Bootstrap](#)
- [drinks-i-link on GitHub](#)
- [Designing a RESTful Web Application](#)

About me

- bryanesmith.com