

***Getting Started with Meteor***  
***Trenton Computer Festival 2013***  
***IT Professional Conference***  
***March 15, 2013***

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# My Background (1)

## 🏠 Degree

- ❑ B.S. in Computer Science
- ❑ Rutgers University (go **Scarlet Knights!**)

## 🏠 “Petrochemical Research Organization”

- ❑ Senior Research Technician (1988-1998, 2004-)
- ❑ Systems Analyst (1998-2002)

## 🏠 Ai-Logix, Inc. (now AudioCodes)

- ❑ Technical Support Engineer (2003-2004)

## 🏠 Amateur Computer Group of New Jersey (ACGNJ)

- ❑ Java Users Group Leader (2001-)
- ❑ President (2007-2009, 2013-), Past-President (2010-present)
- ❑ Secretary (2006)



# My Background (2)



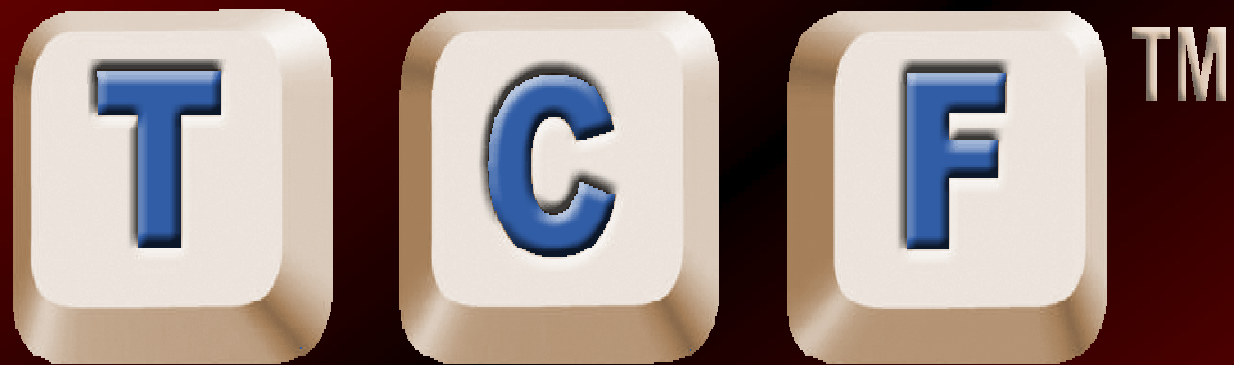
## 🏠 Publications

- ❑ Java Boutique (<http://www.javaboutique.com/>)
  - ❖ Co-authored with Barry Burd
  - ❖ Design Patterns
- ❑ <http://www.redlich.net/publications/>

## 🏠 Presentations

- ❑ Trenton Computer Festival (TCF) since 1998
- ❑ TCF IT Professional Seminars since 2006
- ❑ Emerging Technologies for the Enterprise
- ❑ Princeton Java Users Group
- ❑ Capital District Java Developers Network
- ❑ New York Software Industry Association (NYSIA)

**TCF 2013**



March 15, 2013

Trenton Computer Festival 2013

# Objectives

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- 🚀 What is Meteor?
- 🚀 The Seven Principles
- 🚀 Getting started with Meteor
- 🚀 Live Demo (*yea!*)
- 🚀 Meteor Resources

# What is Meteor?



- 🚀 “...an open-source platform for building top-quality web apps in a fraction of the time, whether you’re an expert developer or just getting started.”
- 🚀 A full-stack framework using JavaScript
- 🚀 Compiles, combines, and distributes, your JavaScript, CSS, and HTML
- 🚀 Deploys on the fly

# Supported Operating Systems



## Mac

- OS X 10.6 and above

## Linux

- x86 or x86\_64 Debian- and Red Hat-based systems

## Windows

- Not supported at this time by core Meteor developers
- Unofficial Windows installer by Tom Wijsman

# *The Seven Principles*

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- 🏠 **Data on the Wire**
- 🏠 **One Language**
- 🏠 **Database Everywhere**
- 🏠 **Latency Compensation**
- 🏠 **Full-Stack Reactivity**
- 🏠 **Embrace the Ecosystem**
- 🏠 **Simplicity = Productivity**

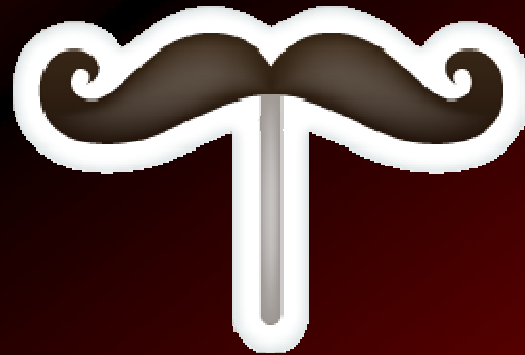


# #1 - Data on the Wire



- ⚠ No HTML is rendered on the server
- ⚠ JSON is sent to the browser
- ⚠ Browser renders the templates

## handlebars



## #2 - One Language



☛ All code is in JavaScript

☐ Client and server



☛ But you could use CoffeeScript as well



## #3 - Database Everywhere



- 🏠 Client data API mirrors the server database API
- 🏠 The local data API looks just like MongoDB



## #4 - Latency Compensation

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⚠ All data operations take place in memory first

## #5 - Full-Stack Reactivity

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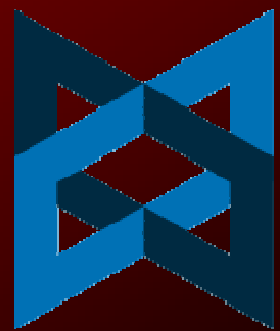


- ⚡ Embraces the concept of reactive programming
- ⚡ Everything is realtime
- ⚡ Templates automatically re-render themselves

## #6 - Embrace the Ecosystem



- ▲ Meteor is open source
- ▲ Integrates existing open source tools and frameworks



# BACKBONE.JS

# #7 - *Simplicity = Productivity*

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🏠 APIs are plain and simple

# Getting Started with Meteor



## 🏠 Download Meteor

- <http://www.meteor.com/>
- <http://win.meteor.com/>

## 🏠 Review the built-in examples

- Leaderboard
- Parties
- Todos
- Wordplay

## 🏠 Create your first Meteor app



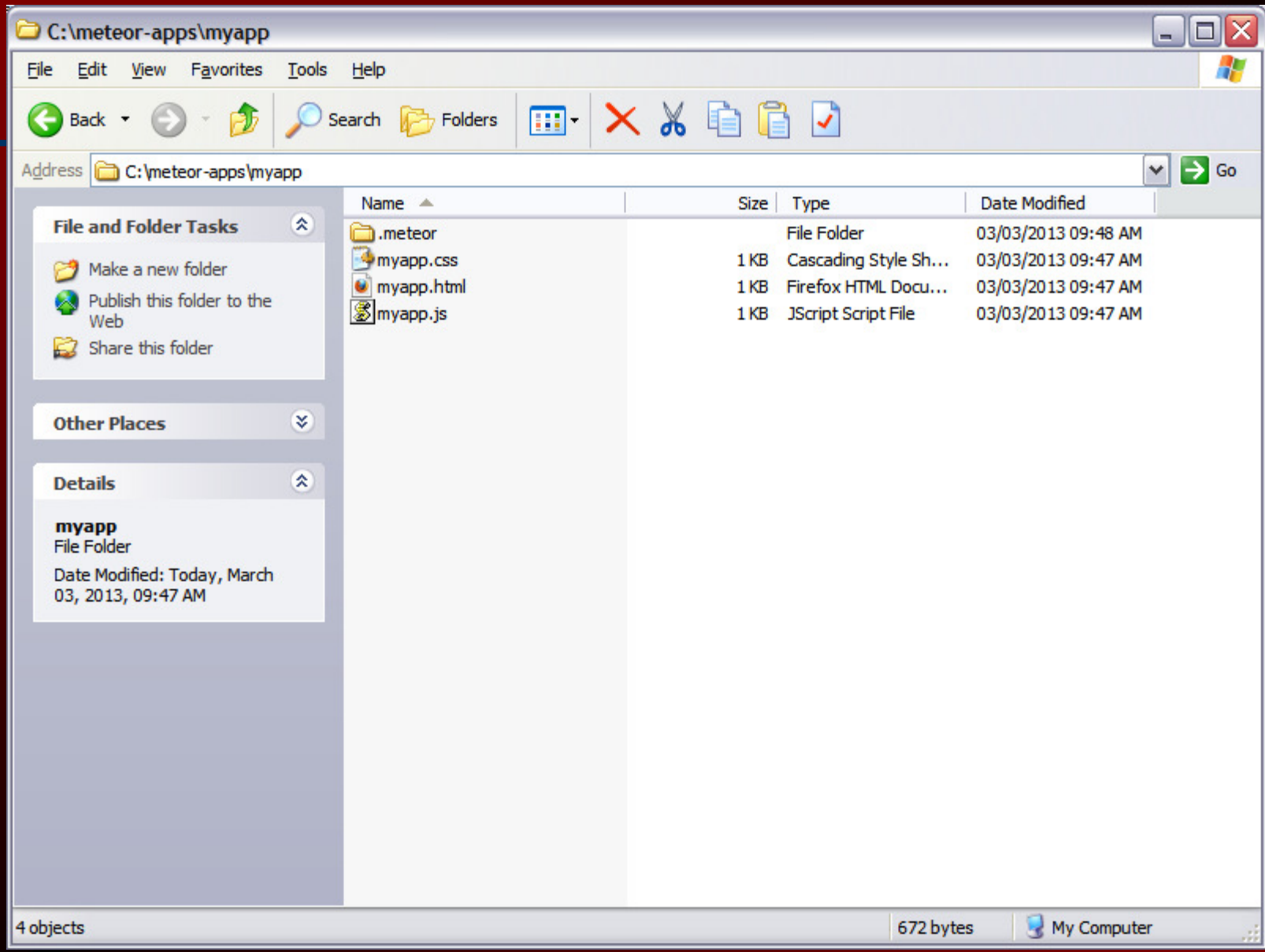


```
C:\meteor-apps>meteor create myapp  
myapp: created.
```

To run your new app:

```
cd myapp  
meteor
```

```
C:\meteor-apps>
```





```
C:\meteor-apps>cd myapp
```

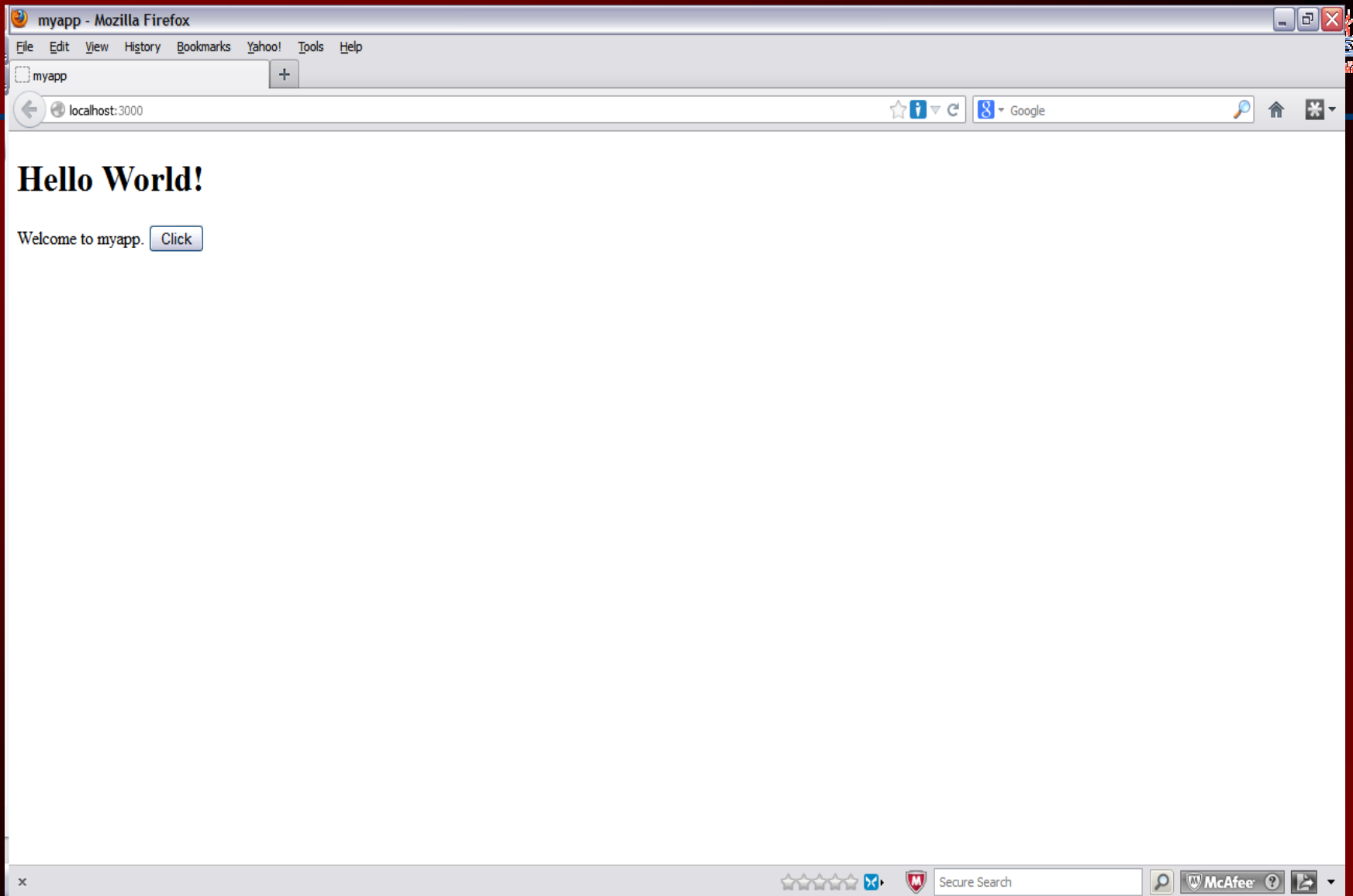
```
C:\meteor-apps\myapp>meteor
```

```
[[[[[ C:\meteor-apps\myapp ]]]]]
```

```
Initializing mongo database... this may take a moment.
```

```
////////////////////////////////////  
////////////////////////////////////
```

```
Running on: http://localhost:3000
```



```
// myapp.html

<head>
  <title>myapp</title>
</head>

<body>
  {{> hello}}
</body>

<template name="hello">
  <h1>Hello World!</h1>
  {{greeting}}
  <input type="button" value="Click" />
</template>
```

```
// myapp.js - client-side code

if(Meteor.isClient) {
  Template.hello.greeting = function () {
    return "Welcome to myapp.";
  };

  Template.hello.events({
    'click input' : function () {
      // template data, if any,
      // is available in 'this'
      if(typeof console !== 'undefined')
        console.log("You pressed the button");
    }
  });
}
```

```
// myapp.js - server side code

if(Meteor.isServer) {
  Meteor.startup(function () {
    // code to run on server at startup
  });
}
```

# Create a MongoDB Database in Meteor



```
// create new database  
  
Players = new Meteor.Collection("players");
```



```
// create some players if the database is empty.
if(Meteor.isServer) {
  Meteor.startup(function () {
    if(Players.find().count() == 0) {
      var names = ["Ada Lovelace",
                  "Grace Hopper",
                  "Marie Curie",
                  "Carl Friedrich Gauss",
                  "Nikola Tesla",
                  "Claude Shannon"];
      for(var i = 0;i < names.length;i++)
        Players.insert({name: names[i], score:
Math.floor(Math.random()*10)*5});
    }
  });
}
```

```
if (Meteor.isClient) {  
  Template.ledgerboard.players = function () {  
    return Players.find({}, {sort: {score: -1, name: 1}});  
  };  
}
```

*And Now For...*

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 ...a live demo (yea!)

# Meteor Resources (1)



## 🚀 Meteor

☐ <http://www.meteor.com/>



← @meteorjs

## 🚀 MongoDB

☐ <http://www.mongodb.org/>



← @MongoDB

## 🚀 Handlebars

☐ <http://www.handlebarsjs.com/>

## 🚀 CoffeeScript

☐ <http://www.coffeescript.org/>

## 🚀 Backbone

☐ <http://www.backbonejs.org/>

# Meteor Resources (2)

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## The Meteor Book

- Coming April 2013

- <http://www.themeteorbook.com/>

## Matt DeBergalis Presentation

- <http://www.infoq.com/presentations/Meteor/>

# Local Java Users Groups



## 🏠 ACGNJ Java Users Group

☐ facilitated by Mike Redlich

☐ <http://www.javasig.org/>



← @jasvasig

← @mpredli

## 🏠 Princeton Java Users Group

☐ facilitated by Yakov Fain

☐ <http://www.myflex.org/princetonjug/>

## 🏠 NYJavaSIG

☐ facilitated by Frank Greco

☐ <http://www.javasig.com/>



← @nyjasvasig

## 🏠 Capital District Java Developers Network

☐ facilitated by Anthony DeBonis

☐ <http://www.cdjdn.com/>