#### Building Responsive Websites with the Bootstrap 3 Framework

#### Michael Slater and Charity Grace Kirk



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### **Today's Presenters**



#### Michael Slater

- President and Cofounder of Webvanta
- Has been creating content-rich websites since the web's early days
- Previously director of technology strategy at Adobe Systems



#### **Charity Grace Kirk**

- Senior web developer at Webvanta
- More than 5 years experience building sites for clients on the Webvanta platform
- Experience in content strategy, search engine optimization, and online marketing.



## **Asking Questions**

#### Now

• Ask questions by entering the text in the GoToWebinar control panel

#### Later

- Follow up with us afterwards (<u>sales@webvanta.com</u>) if you have questions that didn't get addressed
- Link to slides, video, and code will be emailed to you tomorrow



## What is Your Role in Building Websites?

- Designer
- Developer
- Manager



# Why Responsive Design?



# Adapt to a wide range of screen sizes





Dental Care for Your Total Well-Being

Healthy mouth, healthy body.



Is dental care simply a way to have a nice smile? Or is it essential for an active and full life? We now know that the appearance of your teeth is just one reason to receive professional dental care and follow proper home care. A healthy mouth supports and reflects the health of your entire body.





http://www.tempeazdentist.com



#### Desktop-focused sites are hard to use on phones

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# Google encouraging responsive design



Searches on mobile phones should link to mobile-friendly content



# How much of your browsing is on a phone or tablet?

- None
- Less than 10%
- 10% to 40%
- About half
- More than half



### Mobile is Exploding!

#### Mobile devices (phones and tablets)

- Now account for ~20% of all web traffic
- Higher for restaurants, hotels
- Black Friday mobile traffic
  - Up 34% from last year, sales up 43%
  - 21.6% of all online sales from mobile



### **The Mobile Site** Alternative



Courses Spring 2014 Spring 2014 Fall 2013 Summer 2013

+ Undergraduate Graduate

jQuery Mobile

with Server-side

mobile detection

HA 234 | CCN: 05138 Graduate Seminar: Making Art Modern in Japan **Gregory** Levine W 2-5P, 341 STARR LIB

A strong current of books and essays in recent years has brought into fuller view modern formations of art institutions, policies, histories, and aesthetics in Japan in relationship to global flows/conflicts. The time is ripe for reading into ...

[Show more]

HA 263 | CCN: 05143 Graduate Seminar: Theories of Mimesis **Beate Fricke** 

M 10-1P, 308B DOE LIBRARY

Mimesis, Greek for "imitation" has become a key term in recent debates in a number of disciplines. However, what is at its core is often astonishingly undefined, open and ambivalent. Important theories of Mimesis have been articulated ...

[Show more]



Courses

Fall 2013 Summer 2013

Spring 2014

Spring 2013

Spring 2014

Undergraduate Graduate

#### Reading and Writing about Visual Experience: A Small R1B Section 1 | CCN: 04853 World After All: World's Fairs, Theme Parks, and the Politics of Display

Livi Yoshioka-Maxwell Monday, Wednesday | 8:00 - 9:30AM | 104 Moffitt

Reading and composition courses serve as introductions to textual analysis and as guides to the composition of well-argued essays. This will be accomplished by class discussion, by breaking down essay-writing into manageable components, and by ...

#### [Show more]

R1B Section 2 | CCN: 04856 Reading and Writing about Visual Experience: Paris, Capital of the 19th Century

lordan Rose Monday, Wednesday | 9:30 - 11:00AM | 104 Moffitt

rationalization of social ...

What is a Metropolis? Or rather, what is meant by Metropolis? In 1973, Massimo Cacciari offered the following response: "the Metropolis," he says, "is the general form assumed by the process of the

#### [Show more]

#### Reading and Writing about Visual Experience: Greek R1B Section 3 | CCN: 04859 Athletics in Ancient Art

Erin Babnik Monday, Wednesday | 11:00 - 12:30PM | 104 Moffitt

This course is intended to allow students with an interest in art history to develop the basic writing. reading, research, and analysis skills that are necessary for formulating or engaging with substantive ideas about visual media. As a means to

[Show more]

#### http://arthistory.berkeley.edu



### Responsive Design Basics

- Uses CSS Media Queries
- More than just fluid design
  - Columns can stack at smaller widths
  - Sizes, padding, margin ... all can adjust
  - Elements can be hidden or swapped out



#### **CSS Media Queries**

#### For Example:

```
@media (min-width: 440px) and (max-width: 767px) {
    h1.logo {
        text-align: center;
    }
    .subtitle {
        display: none;
    }
```



## Media Query Browser Support

- Chrome, Firefox, Safari, Opera
  - All reasonably recent versions
- IE10 fully supported
- IE9: except for a few CSS enhancements
- IE8: requires respond.js and html5shiv.js
- IE7: not officially supported, but "should look and behave well enough"



### Why Bootstrap?

#### Speed up development

- Responsive grid system
- Quality default typography
- Common components
- Popular jQuery plugins
- Simplifies "bootstrapping" your design



### What is Bootstrap?

- Created by Twitter, published as open source
- Consists of a CSS file, a JS file, and an icon font
- CSS is compiled from LESS source
- JS can be loaded in "everything" version or only selected pieces
  - Requires jQuery



### **Mobile-First Strategy**

#### Content

• Determine what is most important

#### Layout

- Design to smaller widths first
- Base CSS addresses phones; media queries for tablet and desktop

#### **Progressive** enhancement

Add elements as screen size increases



#### Bootstrap Break Points

/\* Extra small devices ("phones", less than 768px) \*/
/\* No media query need as this is the default Bootstrap \*/

/\* Small devices ("tablets", 768px and up) \*/
@media (min-width: 768px) { ... }

/\* Medium devices ("desktops", 992px and up) \*/
@media (min-width: 992px) { ... }

/\* Large devices ("large desktops", 1200px and up) \*/
@media (min-width: 1200px) { ... }



### **Responsive Grid**

- Standard grid is 12 columns wide
- Fluid by default, then 3 fixed widths

design width	fluid	750px	970px	П 70рх
max column	100%	60рх	78px	95рх



#### **Basic Grid Structure**

- <div class="container">
  - <div class="row">
    - <div class="col-\*-\*"></div></div>
    - <div class="col-\*-\*"></div></div>
  - </div>
  - <div class="row">... </div>
- <div class="container">



#### Example 1 understanding.col-md-\*



#### See grid.html



## **Controlling the Grid**

- Each breakpoint has its own grid class
  - .col-xs-\*, .col-sm-\*, .col-md-\*, .col-lg-\*
- Below the smallest defined breakpoint for a column, it stacks vertically



#### **Example 2** easy column scaling up and down

		lg 6		
		lg 6		
		lg md 6		
		lg md 6		
lg md sm 6			lg md sm 6	
lg md sm xs 6			lg md sm xs (	6
lg md		lg md		lg md
sm xs		sm xs		sm xs
2		8		2

#### See grid2.html



## Ordering the Grid

- Push and Pull columns to position on larger widths.
  - e.g. .col-md-push-\* or .col-md-pull-\*



#### **Example 3** easy column positioning



#### See grid3.html



### **Responsive Images**

- Background Images in CSS
  - Can load appropriate-size image based on viewport size (via media queries)
- Images in HTML (<img src="filename.jpg">)
  - Class .img-responsive sets max-width to 100%
  - Browser scales images to fit container, but doesn't allow them to get pixelated



## Helper Classes

- Bootstrap includes a variety of CSS classes to help make markup more semantic
  - pull-left, pull-right
  - center-block, text-right, text-center ...
  - clearfix
  - visible-xs, hidden-xs, visible-md ...



## Navigation

#### Vertical Toggle Nav



West County Health Centers Caring for our Communities

#### a california health.center



Main Menu 📃

Providing comprehensive, quality and accessible health care services to the communities of Western Sonoma County.

We are a cohesive team of health care providers, support staff and volunteers dedicated to wellness, compassion, affordability and excellence of care.

Questions about the health insurance changes coming your way under the Affordable Care Act? Watch the video on this page for an overview.

THE VOLITOONS



West County



Providing comprehensive, quality and

#### Horizontal Nav



http://www.wchealth.org



### **JavaScript Features**

- Many common JavaScript-based plugins and functions included
  - Carousel, transitions
  - Modal, alert
  - Dropdown, tab, tooltip, popover, button
  - Collapse
  - Scrollspy



### JavaScript without JavaScript

- CSS classes and HTML5 data attributes used to trigger behavior
- Bootstrap JS file finds these attributes and uses them to active JS and CSS code



### JavaScript Plugin Examples

#### see widgets.html



### **Visual Components**

- Icon library
- Buttons
- Breadcrumbs
- Pagination
- Navbar
- Progress bar
- ... and more



### Does Bootstrap seem like a good fit for you?

- No (don't plan to support mobile)
- No (plan to support mobile differently)
- Probably, I need to learn more
- Yes, I can't wait!



## Customizing

- Add your own CSS file after the Bootstrap file to override and add classes
- Can edit source LESS files and recompile into customized CSS
  - Upgrading to new Bootstrap version can be difficult



### Other Responsive Frameworks

Foundation (<u>foundation.zurb.com</u>)

• Skeleton (getskeleton.com)



#### **Get Started!**

#### getbootstrap.com

#### www.webvanta.com/trial



### Webvanta SmartTheme

- Gives you an instant start
- Fully hosted, all code in place
- Integrate with database-driven content
- The fast way to a powerful, custom and responsive site
- Join our January webinar



# What are your major questions?

 Let us know what more you'd like to know and we'll use it to guide our upcoming articles and webinars



#### We're Here to Help

- Webvanta specializes in creating content-rich sites that deliver on business goals
- Get your private consultation
  - Free 30-minute consultation
  - email sales@webvanta.com or call 888.670.6793
- Learn more online and stay in touch
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