

Winter 17 - GEOG 371

GeoVisualization: Web Mapping

# Course Introduction

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Bo Zhao Ph.D.

College of Earth, Ocean and Atmospheric Sciences

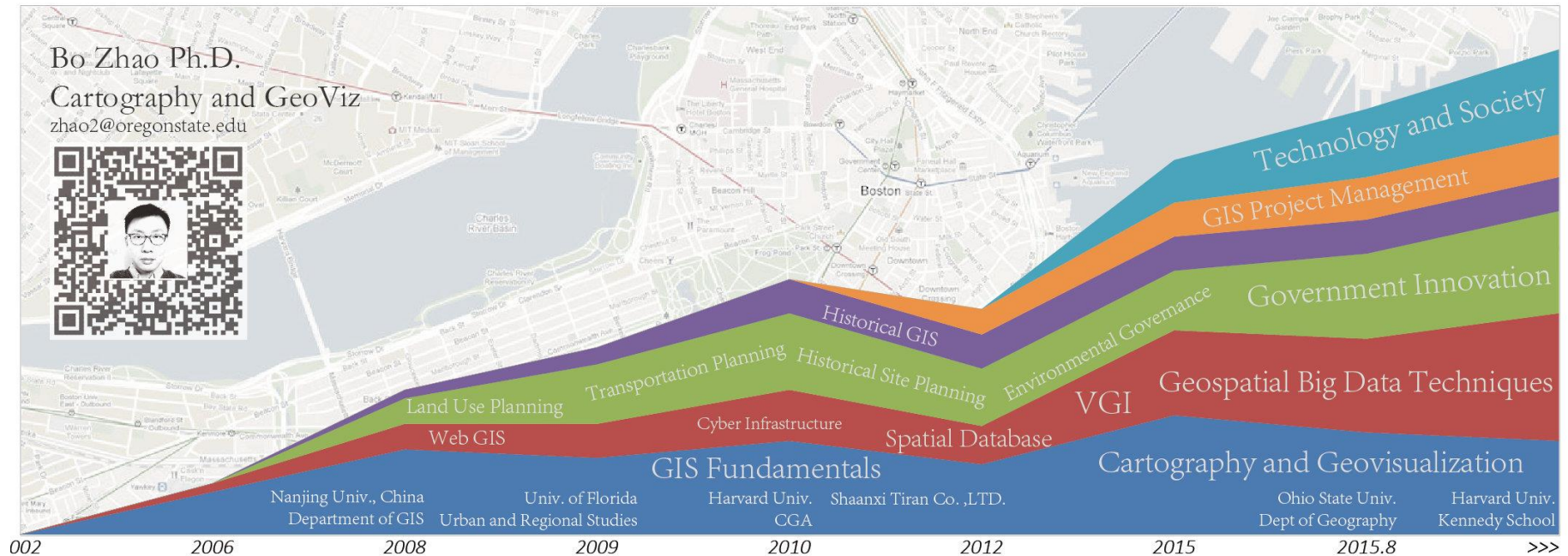
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# Who am I?

Bo Zhao Ph.D.

Cartography and GeoViz

zhao2@oregonstate.edu



Now, why are you here ...?

So, why study Web Mapping?

Instructor:	Bo Zhao, <a href="mailto:bzhao@coas.oregonstate.edu">bzhao@coas.oregonstate.edu</a>
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	Office Hours: 1000-1100 M or by appointment
TA:	Andy Wilson, <a href="mailto:wilsandy@oregonstate.edu">wilsandy@oregonstate.edu</a>
	Office: 348 Strand Ag Hall
	Office Hours: TBD
Text:	No required text. Required papers and online materials will be available on the course website.
Credits:	4
Meeting:	Lecture: MWF 1400-1450 @Wilkinson 235; Lab: TR 1400-1550 @Wilkinson 210
Prerequisites:	GEOG 201 or GEO 301
Grades:	Letter grading (A to F)

# Syllabus

WK	LECTURE (M)	LECTURE (W)	LAB (Tr)	LECTURE (F)	READING
Wk 1	Welcome to this Course	Intro to Web Mapping	Lab 1: First Web Map Using Google My Maps	Web Programming Basics I: HTML5 and CSS	Google Map docs, HTML and CSS.
Wk 2	<i>MLK Day</i>	Web Mapping Architecture	Lab 2: Web Programming Basics II: JavaScript	Spatial Data for Web Mapping	JavaScript, KML, GeoJSON and TopoJSON
Wk 3	Map Client I: Basics and Geographic Features.	Map Client II: Map Events and Mashup	Lab 3: Web Map Design	Map Client III: Web Map Interaction	Leaflet docs and JQuery docs.
Wk 4	Map Server I: Intro to GeoServer	Map Server II: Styling	Lab 3: Cont'd	Map Server III: Web Map Services	GeoServer docs.
Wk 5	Map Server IV: Map Tiles	Midterm	Lab 4: Web Map Service Publishing	Thematic Map on the Web I: Time Series	Bing Map Tile System, GeoWebCache and WMS-T.
Wk 6	Thematic Map on the Web II: Heatmap	Thematic Map on the Web III: Map Story Telling	Lab 4: Cont'd	Map Design I: Template and Framework	Bootstrap 3 docs, Kosara and Mackinlay (2013)
Wk 7	Map Design II: Bootstrap	Map Design III: User Friendly Design Principles	Lab 5: An Integrated Web Mapping Application	Map Design IV: Web Map Critiques	Web Map Design Principles
Wk 8	3D Web Mapping I: Basics	3D Web Mapping II: Cesium.js	Lab 5: Cont'd	3D Web Mapping III: Terrain Map	WebGL specifications, cesium.js and three.js docs.
Wk 9	3D Web Mapping IV: Virtual Environment	Volunteered Geographic Information	Lab 6: Thematic Map Using Virtual Globe	GeoWeb	Elwood et al. (2012), Sui and Zhao (2015)
Wk 10	Real-time Web Map and Internet of Things	Final Project Discussion	Lab 6: Cont'd	Final Project Discussion	ESRI ArcGIS GeoEvent Server.
Final Week: Project Presentation					

# Grading

Item	Description	% of final grade
Quizzes	3 in-class and/or take-home quizzes covering topics from lecture and reading assignments.	12
Lab Assignments	6 lab assignments (9% each). We understand that many of the programming techniques discussed early in the course will be relatively new. Recognizing this, the first few assignments will contain more detailed instructions.	54
Mid-term	Evaluating your understanding about the basic concepts of web mapping programming. It is a closed book exam and will cover material presented before the midterm.	14
Final Project	Each student is required to design a web map and deploy it to a dedicated server. Each student will make a presentation to demonstrate their work. This final project is mainly evaluated by both the presentation and the quality of the web map.	20
TOTAL		100

Any questions?