Intro to GEOG 472/572: Geovisual Analytics

Bo Zhao

CARTOGRAPHY & GEOVISUALIZATION

Oregon State University

Bo Zhao Ph.D.
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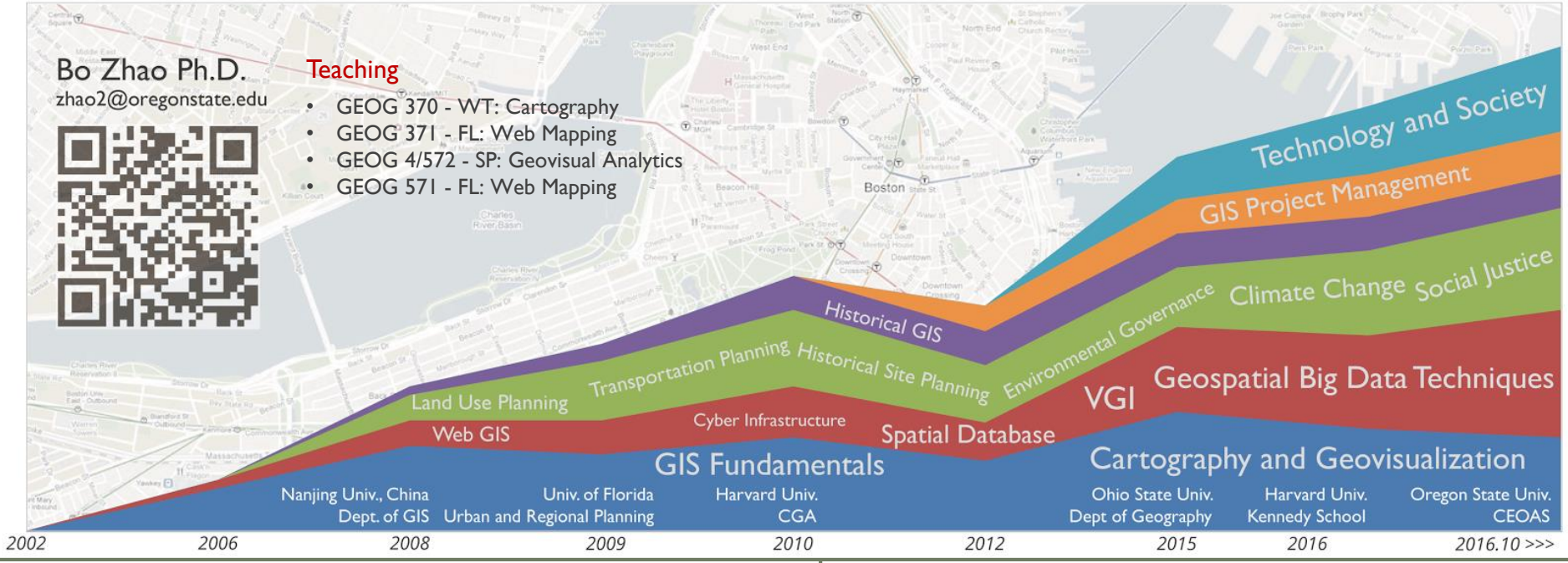
Teaching

- GEOG 370 - WT: Cartography
- GEOG 371 - FL: Web Mapping
- GEOG 4/572 - SP: Geovisual Analytics
- GEOG 571 - FL: Web Mapping



Research Triangle

Location based social media

Spatiality

Environment
Fake News, Food Desert, etc.

Representation
Storytelling with interactive map

Computation
Deep Learning

Who speaks for Climate Change in China (Liu and Zhao, 2017)

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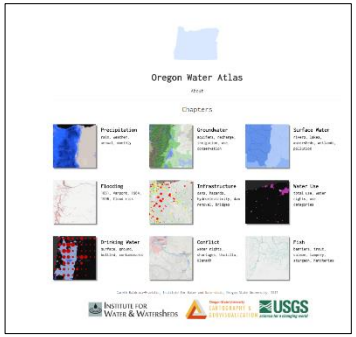
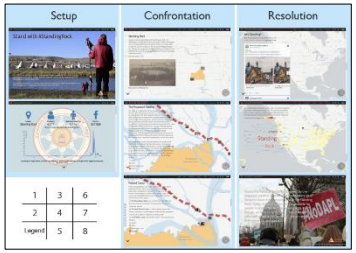
Previous collaboration with students





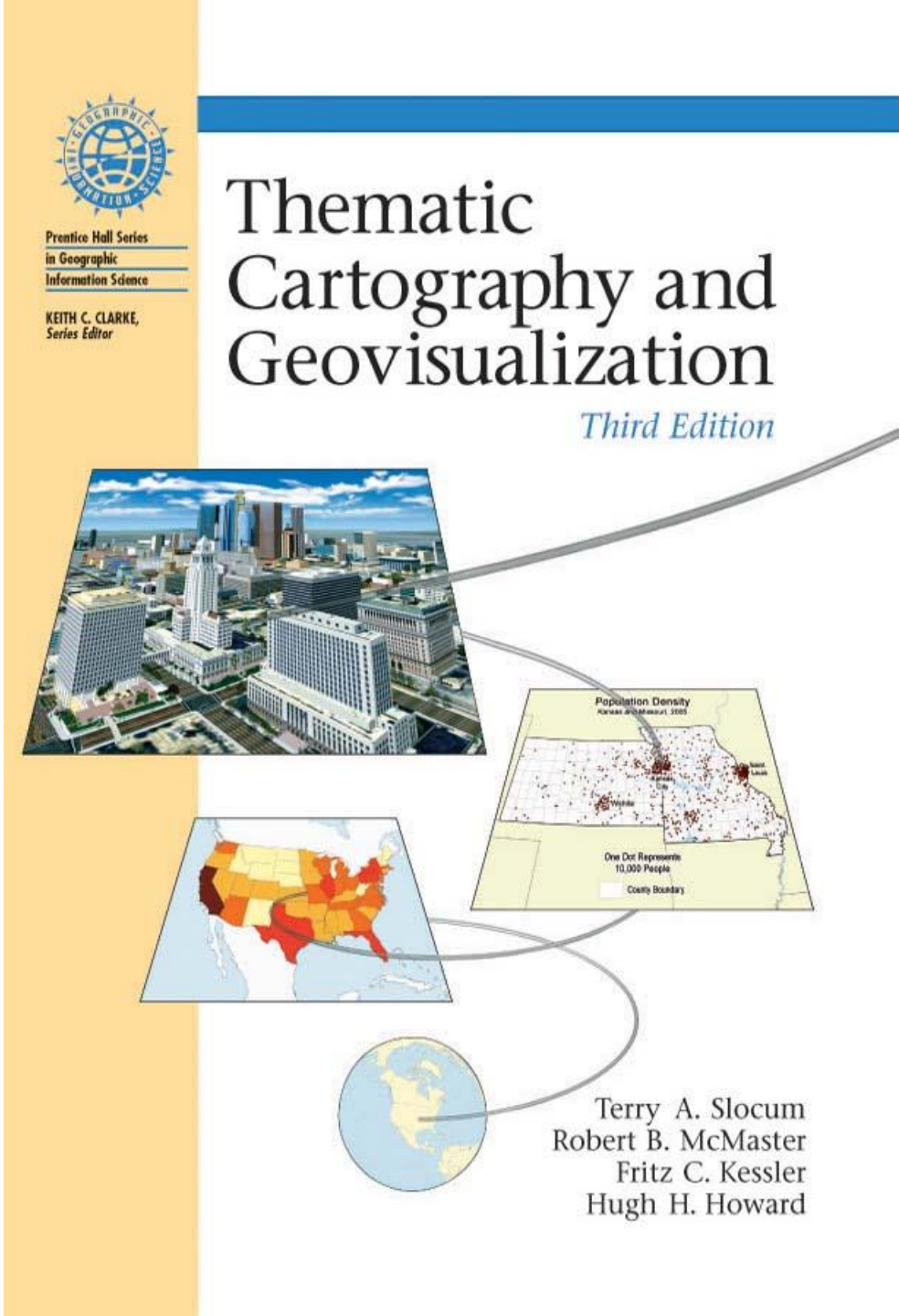
Now, why are you here …?

So, why study Cartography?

Instructor:	Bo Zhao, zhao2@oregonstate.edu
	Office Hours: 1500-1600 T or by appointment @ Strand 347A
TA:	Jared Ritchey, ritcheja@oregonstate.edu
	Office Hours: TBD
Text:	No required text. Required papers and online materials is available on the course website, and recommended books are reserved at the Valley library.
Credits:	3
Meeting:	Lecture: TR 1100 - 1150 @WITH 205; Lab: T 1800 - 1950 @Wilkinson 210
Prerequisites:	GEOG 370 or GEOG 371
Grades:	Letter grading (A to F)

Recommended Book

- Slocum, T.A., McMaster, R.B., Kessler, F.C. and Howard, H.H., 2009. Thematic cartography and geovisualization.
- Web Site: https://media.pearsoncmg.com/bc/abp/slocum3e/



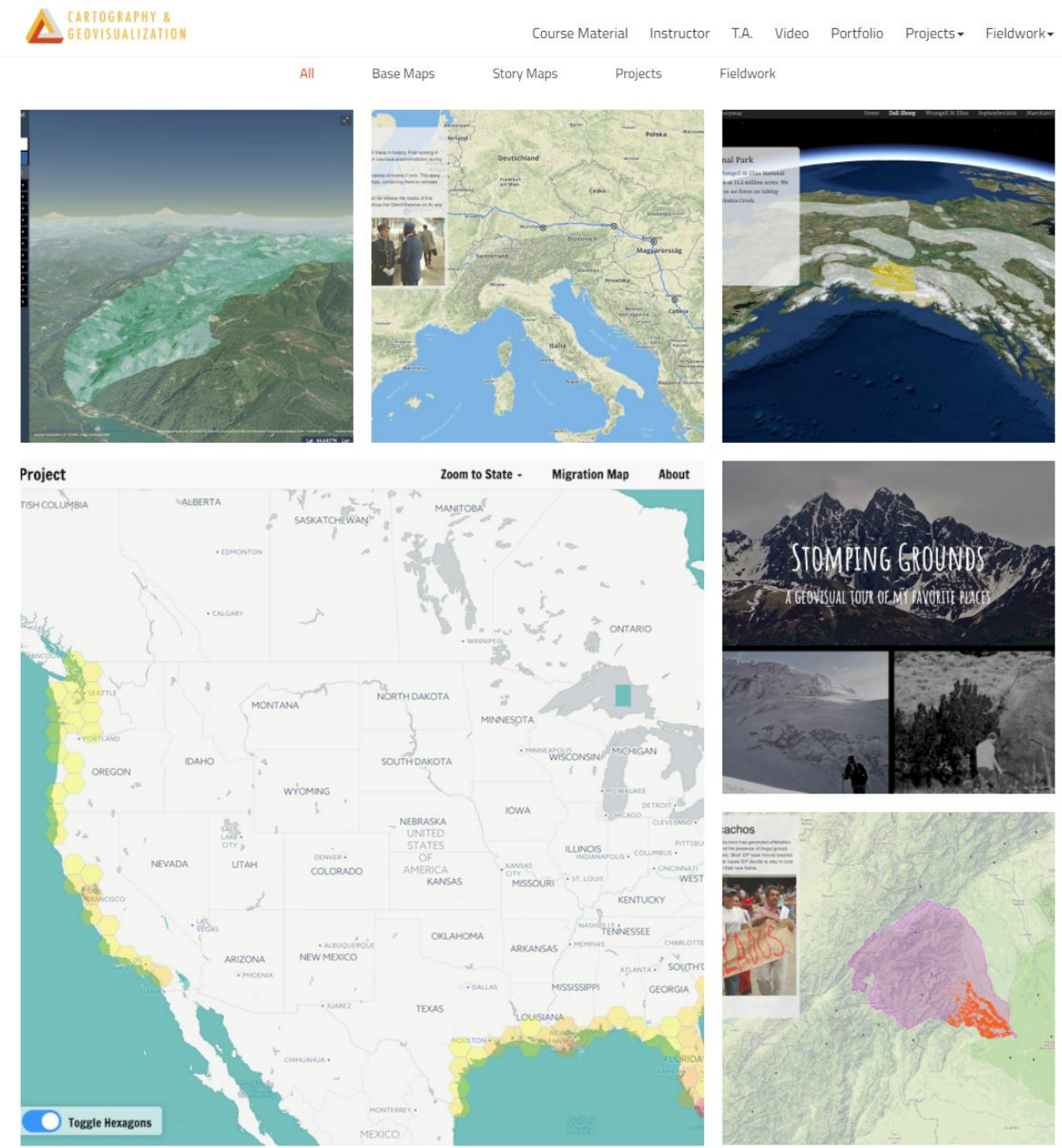
Course Schedule

WK	LECTURE (T)	LAB (T)	LECTURE(R)	PROJECT
Wk 1	Intro to this course	Lab1: Project Management for GeoViz	GeoViz Fundamentals	Introduction
Wk 2	Brainstorms	GeoViz Programming Fundamentals Lab2: Web programming	Interactive Maps using Leaflet	Team-up
Wk 3	Recap + D3 I	Lab3: Map Design	Spatial data Processing	Proposal
Wk 4	D3 II	Lab3 cont'd Google Cloud Platform	D3 III	Proposal revision
Wk 5	Layout Design using Bootstrap, GeoViz evaluation	Lab4: Geoviz Module	Color, Topography	Sketch, Interface Design
Wk 6	SVG, Icons	Lab5: Geoviz Interaction, or Storymap	Word cloud	Design Scheme (Color, label, icon, and multimedia, etc.)
Wk 7	Real-time mapping, Heatmap	Fieldwork for Drone Mapping	GeoViz Critique	Coding
Wk 8	Geoviz of Structure-from-motion	Lab6: Point-cloud GeoViz	Hexagonal Geoviz	Coding
Wk 9	Network	Lab6: cont'd	Flow maps, Sankeys	Fine-tuning
Wk 10	Course Summary	Project Q&A	Final Presentation	Presentation

Grading

Item	Description	% of Final Grade	
		GEOG 472	GEOG 572
Participation	Most classes have time allotted for discussions, in-class work and other activities.	5	5
Quizzes	8 in-class or take-home quizzes covering topics from lecture and reading assignments.	25	20
Labs	2 lab assignments (15% 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.	35	30
Project Development	Each student is expected to make concrete contribute to one major component of the final project. It could be the proposal, the about page, icon, color scheme, font scheme, sketch or etc.	20	20
Project	Each student is required to collaboratively develop a final project using geovisual analytics. Each project should be no more than three members. Graduate students are encouraged to be the group leader or the project coordinator, and undergraduate students are encouraged to be a principle group member. Each group will make a presentation to demonstrate their work. This final project is mainly evaluated by both the presentation and the quality of the geovisual application.	15	25
TOTAL		100	

Previous Year



You need to

- Read the text required for the week
- Come to lecture
- Must attend the labs
- Submit assignments on time
- Follow the academic honest policy
- Ask questions
- Happy mapping + coding!

Any questions?