TR 1100 -1150 @ WITH 205

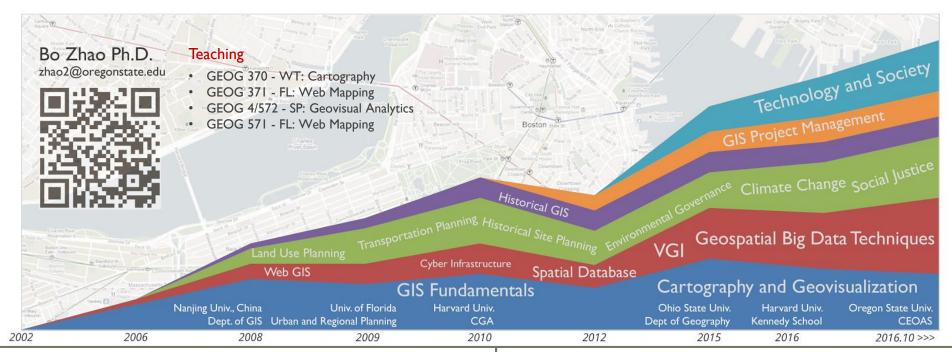
GEOG 472/572: Geovisual Analytics

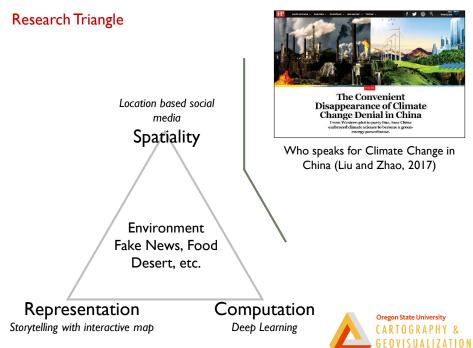
Intro to GEOG 472/572: Geovisual Analytics

Bo Zhao

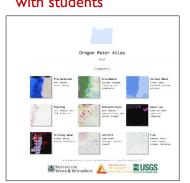


Oregon State University





Previous collaboration with students





THE GREAT ESCAPE

Migration spurred by rising seas could reshape the country

On a screen the size of a small theater. Oregon State University student researchers display the country's coastline. Along ever sea-washed state from New England to the Gulf of Mexico and up the West Coast, they run a chain of boxes like a pearl necklace an Francisco Bay Area and Puget Sound.

With a single click of a mouse on a box, Hoda Tahami sends a web of lines to other parts of the country. By clicking on Miami, for example, she launches threads running up the East Coast, into the Midwest and inland to the cities of the West and South. Each

trigger migrants to travel along these paths. Scientists such as OSU Distinguished Professor Peter Clark estimate that sea level will continue to rise through this century well into the future emographer Mathew Hauer has calculated that if seas rise 1.8 neters, just under 6 feet, more than 13 million people could stimated that globally, 2 billion people could be forced to

State's grovisual analytics course ("groviz" for short), created the migration map to show how the country's population might shift. wanted to understand how sea level rise will affect people in their lives," says Tahami, a Ph.D. student in geomatics, the practice of rveying and measuring the Earth's surface.

who participated in the project. "These people will have to Ph.D. student in water resources, and by Riley Johnson, an undergraduate in geography. Using data shared by Hauer, they worked with Bo Zhao and David Wrathall, assistant professors

Nick Mathews, a graduate student in geotechnical enginer

For their efforts, the students earned a first-place award in the 2017 Ecological Visualization contest funded by a National Science Foundation grant to the VISTAS project at Evergree



Now, why are you here …?

So, why study Cartography?

	Bo Zhao, zhao2@oregonstate.edu		
Instructor:	Office Hours: 1500-1600 T or by appointment @ Strand		
	347A		
TA:	Jared Ritchey, <u>ritcheja@oregonstate.edu</u>		
IA.	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.c om/bc/abp/slocum3e/



Thematic Cartography and Geovisualization

Third Edition



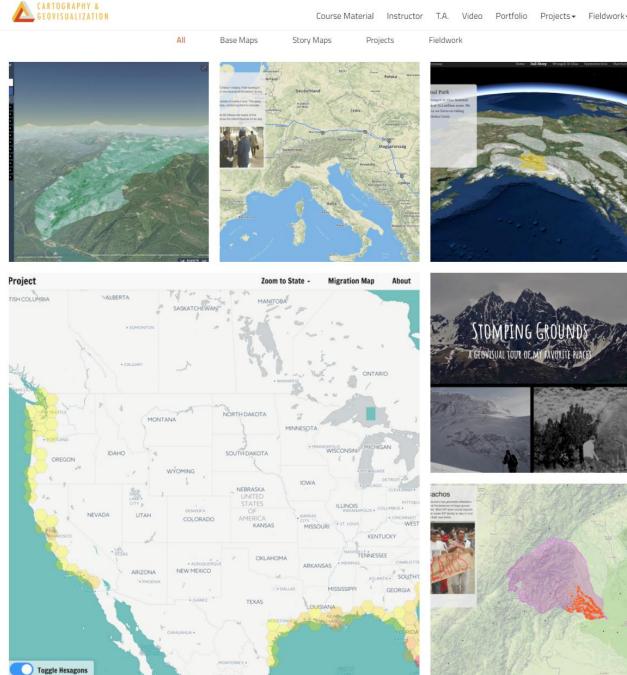
Course Schedule

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

ltom	Description	% of Final Grade	
Item		GEOG 472	GEOG 572
Participation	Most classes have time allotted for discussions, in-class work and other activities.		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?