JOU 4930 Dataviz & Mapping

Spring 2018 | Section 015A | Periods 8-10 Thursdays, Weil 0273 | 3 credits

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Office hours: Periods 6-7 (12:50p to 1:40p) Wednesday; 4-5 (10:50a to 12:35p) Thursday
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"Office hours" are times I dedicate to being in the office (unless called away) and are first-come, first-served. Or, make an appointment. Or, drop in if the door is open.

ABOUT THE COURSE

Course Description

This course covers the foundational skills required for any professional communicator who seeks to tell a visual data story for audiences that rely on cellphones, as well as the basics of geospatial analysis. The emphasis is on data evaluation using code-free tools. Prerequisite: Sophomore standing and either MMC 2450 (Data Literacy) or permission of instructor.

About Data Courses

This course complements JOU 3305 Data Journalism and together form a two-course sequence in the numerical side of data. It also can pair well with JOU 3362 (Intro to Comm Web Apps) to form a two-course sequence in data presentation.

Objectives

By the end of the course, you should be able to:
- Create a visual, scrollable data story optimized for a cellphone.
- Identify reliable sources of data, their characteristics and their limitations.
- Scrutinize data to find insight and patterns of interest to the audience.
- Match visualization techniques to the data.
- Use color, type, shapes and other tools to foster accuracy and clarity.
- Perform basic geospatial analysis suitable for professional communicators.

Required Textbook

None you have to buy! Assigned readings and library e-books are linked on Canvas.

Required Laptop

The classroom has no computers, so you need to bring your own laptop. Either a Mac or Windows device will do. But it needs to be a laptop, not a tablet.

Tentative Schedule

	Date	Theme	Key Topics	Tools	Before Class	After Class
1	Jan. 11	Introduction	Data sources; visual storytelling; planning your data story			Homework Assign 1
2	Jan. 18	Design Principles	Color; typography; accessibility; UX; UI; cellphone vs. desktop	Excel	Readings on Canvas	Homework Assign 2
2	Jan. 25	Data Principles	Data limitations; valid comparisons; types of variables	Excel	Readings on Canvas	Homework Assign 3
4	Feb. 1	Data Analysis	Variance; correlation; differences in means; statistical significance	Excel, Tableau	Readings on Canvas	Homework Assign 4
5	Feb. 8	Visual Analysis	Scatterplots; histograms; box plots; quartiles	Tableau	Readings on Canvas	Homework Assign 5
6	Feb. 15	Charts	Matching chart to data; legends; axes; tailoring for cellphone	Datawrapper	Readings on Canvas	Homework Assign 6
7	Feb. 22	Maps as a Visual Tool	Proper use of maps; choropleth, point, heat; mapping data	Tableau Datawrapper Fusion table	Readings on Canvas	Homework Assign 7
8	March 1	Visual Storyboarding	Storyboard your project, tailored for a cellphone		Outline your story	Exam 1 (take at home) due
	March 8	No class (spring break)				
9	March 15	Designing the Story	Basics of using a code-free tool to tell a data-driven, visual story	Quadrigram		Homework Assign 8
10	March 22	Refining the Story	Gaining fluency in using Quadrigram to build the story	Quadrigram		Homework Assign 9
11	March 29	Story Project Presentations	Each student shows final story project during class		Prepare your project	Post project URL by April 2
12	April 5	Geospatial Basics	GIS principles; datums; projections; coordinates	QGIS		Homework Assign 10
13	April 12	Geospatial Geocoding	Geocoding addresses; calculating spatial boundaries	QGIS		Homework Assign 11
14	April 19	Geospatial Joins	Joining spatial data; census data; census shapefiles	QGIS		Exam 2 (take at home)

ASSIGNMENTS AND GRADING

Grade Allocation
Homework Assignments and Quizzes (one low score drops) 50%
Exam 1 (take at home, due March 12) 15%
Visual Data Story Project (due April 2) 20%
Exam 2 (take at home, due April 30) 15%

Homework Assignments and Quizzes (50%)
Homework assignments and some pop quizzes will reinforce learning and test assigned readings. One low score from the semester will drop.

Exams 1 and 2 (15% each)
These are take-at-home exams. You can use your notes and consult readings, but not each other: these are take-by-yourself tests.

Exam 1 will cover the first eight weeks of class. It will be available on Canvas before spring break. It will be due by 11:59 p.m. Monday, March 12, the Monday after spring break.

Test 2 will be cumulative while focused mostly on QGIS. It will be available shortly after the last class period, about April 20. It will be due by 11:59 p.m. Monday, April 30.

Visual Data Story Project (20%)
This is an original, timely, data-driven visual story tailored to an audience and optimized for a cellphone. Stories that earn an A will be ready for publication or a client presentation. See the rubric on the next page for more details.

You will present your completed (not a draft) project in class on March 29 so you can get peer feedback and make improvements before submitting a version for grading, which will be done on a cellphone. A URL for the project is due at 11:59 p.m. Monday, April 2.

Attendance
Attendance is expected. Course requirements for attendance, make-up exams, assignments and other work are consistent with UF policy. For absences covered by UF policy, such as illness, you are responsible for alerting the professor before class and for promptly providing appropriate documentation.

Grading Scale

	Percent		Percent		Percent		Percent
		B+	89-87%	C+	79-77%	D+	69-67%
A	100-93%	B	86-83%	C	76-73%	D	66-63%
A-	92-90%	B-	82-80%	C-	72-70%	D-	62-60%

Scores are rounded to the nearest whole point: 89.4 rounds down to 89 (B+) while 89.5 rounds up to 90 (A-). The UF grading policy details how GPA is computed.

Visual Data Story Project Rubric

Category	Excellent (A) 10-9 points	Very Good (B) 8 points	Good (C) 7 points	Satisfactory (D) 6 points	Unsatisfactory 5-0 points
1. Topic Compelling	Story original and (1) timely, (2) data-driven, (3) relevant to audience, (4) sufficiently interesting to be shareable	All criteria met yet story not compelling	Three criteria met	Two criteria met	One criterion met
2. Clear Presentation	Story presentation is clear in the (1) headline, (2) visuals, (3) and text so that, as a whole, story (4) reads quickly on a cellphone	All criteria met yet story is less than crystal clear	Three criteria met	Two criteria met	One criterion met
3. Solid Data Sources	Data are (1) reliable, (2) sufficient to answer the question, (3) without significant holes and (4) properly credited	All criteria met yet sources are deficient or lacking	Three criteria met	Two criteria met	One criterion met
4. Solid Data Analysis	Author has (1) offered evidence of (2) meaningful (3) primary analysis that (4) is statistically significant	All criteria met yet analysis is unconvincing	Three criteria met	Two criteria met	One criterion met
5. Visual Phone Story	Scrollable story forms (1) a cohesive narrative that is (2) easily read on a phone (3) with meaningful visual elements that (4) break up text of 3 graphs max	All criteria met yet story not optimal for phone	Three criteria met	Two criteria met	One criterion met
6. Quality Data Presentation	Data are presented through (1) 3 or more charts, tables or maps (2) of 3 different types, (3) visuals match the data type and (4) are done properly in labels, axes, etc.	All criteria met yet visuals not all of high quality	Three criteria met	Two criteria met	One criterion met
7. Clear Visual Mechanics	Visuals presented with clarity in use of (1) color and (2) typography that is (3) accessible and (4) readable on a cellphone	All criteria met yet visuals less than clear in mechanics	Three criteria met	Two criteria met	One criterion met
8. Quality Sourcing	Story has 3 authoritative data or human sources; at least two are humans	Three sources but not all are high quality	Three lower quality sources used	Two sources used	One source used
9. Concise Presentation	Story is concise in (1) the overall presentation as well as in (2) text and (3) charts and tables and (4) visuals	All criteria met yet story lacks crisp concision	Three criteria met	Two criteria met	One criterion met
10. Solid Writing Mechanics	Story is (1) lucid and clear with (2) no spelling errors and few errors in (3) grammar or (4) punctuation	All criteria met yet writing less than solid	Three criteria met	Two criteria met	One criterion met

OTHER IMPORTANT DETAILS

Academic Integrity

UF students pledge to abide by an honor code that prohibits academic dishonesty such as fabrication, plagiarism and cheating. You have an affirmative obligation to understand what constitutes academic dishonesty. You also must report to appropriate personnel any condition that facilitates academic misconduct. If you have any questions or concerns, please contact me.

When I discover cheating, my default policy is to fail all involved for the entire course and report the details to the Dean of Students Office.

Course Evaluations

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations. You will be notified by email when the evaluations are open, typically in the last two or three weeks of the semester. Summary results are available to you and the public.

Please note that evaluations serve two purposes: They (1) help my boss evaluate my performance and (2) enable me to improve my teaching and this course for future students. Therefore, what you have to say matters.

Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter, which must be presented to me when requesting accommodation. Such requests should be made as soon as possible – preferably at the start of the semester – so that I can adjust to the accommodation and therefore assist you in your learning.

Health and Wellness

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on campus by encouraging everyone to look out for one another and to reach out for help if a person is in need.

If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by calling 352-392-1575.

The U Matter, We Care team can help connect students to many other helping resources including, but not limited to, victim advocates, housing staff, and the Counseling and Wellness Center. Asking for help is a sign of strength.

In case of emergency, call 911.

Academic Resources

- E-learning technical support: 352-392-4357 (select option 2) or e-mail to Learningsupport@ufl.edu or reach the website.
- For career advice and planning, or even help selecting a major or minor, contact the Career Resource Center in the Reitz Union, 392-1601.
- For help in finding resources, ask a UF librarian through Library Support.
- General study skills and tutoring available from the Teaching Center, Broward Hall, 392-2010 or 392-6420.
- Have a complaint? See the UF Complaints Policy for links and directions.