JOU 3121 Dataviz & Mapping

Spring 2021 | Class # 22063 (section DVIZ) & 27675 (section DVZ2) | Online 100% | 3 credits

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Associate Professor Norman P. Lewis, Ph.D.

Office: Virtual in spring 2021 (normally, Weimer 3052)
Office hours: Mondays and Tuesdays 3:00 to 6:00 pm via Zoom, by Canvas appointment
Contact: Email nplewis@ufl.edu or message through Canvas

Office hours are available via Zoom for reservable sessions via Canvas (Calendar / Find Appointment). If you have conflicts during those time slots, contact me and we'll find a mutually agreeable time.

ABOUT THE COURSE

Course Description

This course covers the foundational skills to (1) create a mobile-first, visual data story and (2) conduct geospatial analysis. The emphasis is on evaluation and presentation using open-source (free) tools without customized coding.

Objectives

By the end of the course, you should be able to:

- Create visual, scrollable data stories optimized for a cellphone.
- Conduct geospatial analysis to find a journalistic story.
- 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.

Required Textbook

"How Charts Lie: Getting Smarter About Visual Information" by Alberto Cairo (2019). W.W. Norton & Co. ISBN: 978-1-324-00156-0

Computer Requirements

Either Apple Mac or Windows is fine. Ensure the operating system has been updated in the last year and the hard drive has at least 20% space so we can load two programs. Have Excel, which is free for UF students. Also, have a Google drive account, which you have if you have Gmail.

IRE Membership

For just $25, the student rate, join Investigative Reporters and Editors (IRE) (which includes NICAR, the premiere association for data journalists) for one year. You to join insider email lists (hint: job prospects), access to inspiration, and tip sheets. Plus, it will let me pay for your NICAR 2021 registration. More in class.

Course Plan
We will meet by Zoom at the time in the UF schedule. These will be learn-by-doing sessions. All students will take turns controlling the screen while I guide you through problem-solving. Scripts will be on Canvas and Zoom sessions will be recorded so you can review.

Tentative Schedule (subject to change)

	Date	Theme	Key Topics	Assignment
1	Jan. 14	Visuals 1: The Data Story	How to create a mobile-first, visual story using 3 Datawrapper charts and publish on Medium	H1: due Jan. 19
2	Jan. 21	Visuals 2: Chart Types	Identifying the story in the data and matching primary chart types to the data	H2: due Jan. 26
3	Jan. 28	Visuals 3: Refining Charts	Refining charts with visual embedding cues, annotating charts	H3: due Feb. 2.
4	Feb. 4	Visuals 4: Mapping Data	Point, choropleth, and spike maps	H4: due Feb. 9
5	Feb. 11	Visuals 5: Locator Maps	Locator maps that reveal location-specific data or time-sequence data	H5: due Feb. 16
6	Feb. 18	Visuals 6: Pattern Detection	Using Tableau to find significant patterns; quartiles, correlations, box-and-whisker plots	H6: due Feb. 23
7	Feb. 25	Demo Visual Data Story	Demo your completed (not draft) data story in class and use feedback to refine; due next day	Data story due Feb. 26
8	March 4	NICAR and Midterm	No class so you can attend virtual NICAR data journalism conference	Midterm due March 9
9	March 11	GIS 1: Cartography	Mapping mechanics; ethics of geospatial data; importing geodata; point analysis in QGIS	H7: due March 16
10	March 18	GIS 2: Joining	Joining numbers and geodata; choropleth and histogram analysis; geocoding; map styling	H8: due March 23
11	March 25	GIS 3: Point Analysis	Geospatial analysis sans maps; point analysis; clipping layers; analysis by locale and time	H9: due March 30
12	April 1	GIS 4: Spatial Analysis	Isochrone analysis: Setting and measuring parameters using distance and traffic data	H10: due April 6
13	April 8	Demo GIS Project	Demo your completed (not draft) GIS project to class and use feedback to refine; due next day	GIS project due April 9
14	April 15	Final Exam	No class so you can complete final exam	Final exam due April 15

ASSIGNMENTS AND GRADING

Grade Allocation
Homework (all 10 count; each due 11:59 pm on Tuesdays) 40%
Visual Data Story (due 11:59 pm Friday, Feb. 26) 20%
GIS Project (due 11:59 pm Friday, April 9) 20%
Midterm (take at home; due 11:59 pm Tuesday, March 9) 10%
Final (take at home; due 11:59 pm Thursday, April 15) 10%

Homework (40%)
Homework assignments will reinforce classroom learning and apply assigned readings. All 10 planned homework assignments count. Each is worth 4% of the grade.

Visual Data Story (20%)
This is an original, journalistic, and data-driven visual story optimized for a cellphone with 5 charts or maps of 3 different types. An "A" story asks and answers a meaningful question and is ready for publication. See the following rubric for more information.

The data story can be inspired by other work, but still must be your own work, and only for this course. Any sources of data or inspiration should be identified along with the story.

The story can appear as a draft Medium post, just like the homework assignments that will precede it. I will grade it on my cellphone.

You will present your completed (not a draft) data story in class on Feb. 25 so you can get peer feedback and make refinements before submitting a version for grading. Upload the URL for the data story before 11:59 p.m. Friday, Feb. 26.

Exams: Midterm (10%) and Final (10%)
These are take-at-home (and take-by-yourself) exams. You can use your notes and consult readings including the textbook, but not each other.

The midterm will cover the first half of class. It will be available on Canvas by Feb. 26. It is due 11:59 p.m. Tuesday, March 9.

The final will cover the second half of class (GIS). It will be available on Canvas by April 9. It is due 11:59 p.m. Thursday, April 15, in lieu of class.

GIS Project (20%)
This is an original, timely and journalistic geospatial analysis based on QGIS. It should (a) be enlightening and relevant to the audience of your choice, and (b) identify the next steps you would take to publish your analysis, such interviewing specific (preferably named) people. An "A" project asks and answers a meaningful question and is likely to produce a publishable story.

The GIS project can be inspired by other work you have seen, but still must be your own work. Any sources of data or inspiration should be identified along with the project. See the following rubric for more details.

You will present your completed (not a draft) GIS project (and show how you did the analysis) in class on April 8 so you can get peer feedback and make refinements before submitting a version for grading. Upload the GIS project by 11:59 p.m. Friday, April 9.

Rubric for Weekly Medium Homework Stories and Visual Data Story Project

Story: Accurate; interesting, meaningful, and relevant; informative yet terse; easy to comprehend (50 points)

Story Criteria	Standard	Points of 5
1. Relevant	Answers question relevant to the audience	
2. Newsy	Relatively current and interesting topic	
3. Pattern	Identifies patterns through spreadsheet analysis	
4. Focused	One, consistent point from first sentence onward	
5. Headline	Grabs attention while fairly summarizing story	
6. Concise	Text is brief, in 3 paragraphs (5 for project) up to 3 sentences each	
7. Detailed	Sufficient detail to explain the story without obvious omissions	
8. Sources	All sources cited in story (for project, at least 3 authoritative human or data sources) and in visuals	
9. Lucid	Clear, readable syntax; correct spelling, punctuation, and grammar	
10. Journalistic	Tone is neutral and without personal pronouns or opinion	

Visuals: Charts and maps are so clear, interesting, and illustrative that they and the headlines could carry the story without text paragraphs; built for mobile (50 points)

Visuals Criteria	Standard	Points of 5
1. Match	Visuals match story and complement, not repeat, text	
2. Data-first	Data dictate the visual type	
3. Quantity	At least 3 (5 for project) charts and/or maps used	
4. Variety	After Homework 1, no more than 2 of the same type	
5. Scannable	All visuals "read" quickly on a mobile device	
6. Format	All visuals are formatted for portrait (vertical) orientation on phone	
7. Text	Heads/subheads/notes are clear, representative, and complete	
8. Fairness	Choropleth maps reflect meaningful pattern and not just population; chart axes are fair and do not mislead or exaggerate	
9. Hierarchy	Data sorted by expected hierarchy, such as time from left or data sorted by largest/best on top	
10. Color	Matches data type and subject while avoiding stereotypes and color blindness; if appropriate, used for emphasis	

GIS Project Rubric

	Excellent (A)	Very Good (B)	Good (C)	Satisfactory (D)	Unsatisfactory
Insight (50%)	"Wow" insight is original, fresh and meaningful; clearly merits wide social sharing (like gaps in fire-rescue locations)	Original insight meaningful and merits social sharing but lacks "wow" (like crime density associated with poverty)	Original insight meaningful and thus merits social sharing but expected (like biggest water users living in rich subdivisions)	Original insight of limited value or meaning (like rural voters are mostly GOP and urban voters mostly Dem)	Original insight has little value and unlikely to be shared
Analysis (20%)	Analysis could only be done using a GIS tool (QGIS)	Analysis could only be done using a GIS tool (QGIS)	Analysis could only be done using a GIS tool (QGIS)	Analysis could only be done using a GIS tool (QGIS)	Analysis could have been done via a visual mapping tool like Datawrapper
Variables (10%)	Two or more variables that are geographically based	Two or more variables that are geographically based	Two or more variables that are geographically based	Two or more variables that are geographically based	One variable that is geographically based
Styling (10%)	Symbols and colors match variables and message; map could be published	Symbols and colors match variables and message; ap could be published	Symbols and colors match variables and message	Only symbols or colors (not both) match variables and message	Neither symbols nor colors match variables or message
Next steps (10%)	Specify all next steps that would ensure project published or advanced	Specify next steps that would ensure project published or advanced	Specify next steps that might help project to be published or advanced	Offer next steps likely to help but are a little vague or incomplete	Next steps are unlikely to help project to be published or advanced

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.

OTHER VERY IMPORTANT DETAILS

Academic Integrity
UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code." On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (https://sccr.dso.ufl.edu/process/student-conduct-code) specifies a number of behaviors that are in violation of this code and the possible sanctions. Also, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with 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.

In the Zoom Room
Please be engaged, which is to say:
1. Be in a quiet room. Don't Zoom and drive.
2. Be upright and look presentable.
3. Put down the Mobile Distraction Device, also called a "phone."

Diversity
The College of Journalism and Communications embraces an intellectual community enriched and enhanced by diversity along several dimensions, including race, ethnicity and national origins, gender and gender identity, sexuality, class, and religion. Each course is expected to help foster an understanding of the diversity of peoples and cultures and of the significance and impact of mass communications in a global society. To that end:
1. Please let me know if you find any material in the course violates that expectation.
2. Please alert me if you have a name or preferred pronouns that differ from the class roll information, which is my only source of information about you.
3. If you have any concerns involving diversity in this course that you feel uncomfortable discussing with me, I encourage you to contact Professor Joanna Hernandez, CJC director of inclusion and diversity, at jhernandez@jou.ufl.edu.

Students with Disabilities
Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting the get-started page. It is important to share any accommodation letter with me and discuss access needs as early as possible in the semester.

Course Evaluations
Please provide feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available. You will be notified when the evaluation period opens.

Students can complete evaluations through the email they receive from GatorEvals, in the Canvas course menu under GatorEvals, or via the [Gatorevals website](#). Summaries of course evaluation results are [publicly available](#).

Health and Wellness

- U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care [website](#) to refer or report a concern and a team member will reach out to the student in distress.
- Counseling and Wellness Center: Visit the Counseling and Wellness Center [website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.
- Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need or visit the Student Health Care Center [website](#).
- University Police Department: Visit UF Police Department [website](#) or call 352-392-1111 (or 911 for emergencies).
- UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville. Visit the UF Health Emergency Room and Trauma Center [website](#).

Academic Resources

- E-learning technical support: Contact the UF Computing Help Desk [website](#), or phone 24/7 at 352-392-4357, or email helpdesk@ufl.edu.
- Career Connections Center: Career assistance and counseling services. Visit the [website](#). Reitz Union Suite 1300, 352-392-1601.
- Library Support: Various ways to receive assistance with respect to using the libraries or finding resources. Visit the [website](#).
- Teaching Center: General study skills and tutoring. Visit the [website](#). Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420.
- Online Student Complaints: View the Distance Learning Student Complaint Process [website](#).