

Course Syllabus

Visual Analytics DSBA 5122

Fall 2022, 12:00-2:45pm Mondays, Center City 1101

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Proposed schedule

Date/Time	Topic	Assignment
8/22/2022	Introduction to visual analysis and analytical storytelling	
8/29/2022	Introduction to R and ggplot	ggplot Assignment
9/5/2022	Labor Day – No Classes	
9/12/2022	Effective visuals - Color, Tableau tutorial I	Tableau Assignment
9/19/2022	Effective visuals – Reducing clutter, Tableau tutorial II	
9/26/2022	Developing your story (theory), Developing your story (example)	Flipgrid video recording
10/3/2022	Cognitive aspects of visualization, Multi-dimensional Visualization	Midterm presentations instruction out
10/10/2022	Student Recess – No Classes	
10/17/2022	IEEEVIS Conference 2022	
10/24/2022	Midterm Presentations	Case study writeup instructions out
10/31/2022	Case study discussions	Hiring by machines

11/7/2022	Text Analysis and Visualization, Vega-lite	Vega-lite assignment
11/14/2022	The persuasive power of visualization, Delivering presentations	Final Project Instructions out
11/21/2022	Geospatial Visualization, PowerBI	
11/28/2022	Effective communications for storytelling	
12/5/2022	Final Project Question Answering	
12/12/2022	Final Project Presentations	The presentations would take place during our final exam time

- Assignments are small problem sets designed to reinforce the concepts learned in the lectures.
 - Participation (**5pts**) - Share two or more visualizations and storytelling examples of your choice with the class.
 - R ggplot2 Assignment (**10pts**)– visualization exercise with ggplot in R.
 - Tableau assignment (**10pts**) – Creating visualizations in Tableau
 - Flipgrid video recording assignment (**10pts**) - video record a short presentation to understand your style and areas for improvement
 - Lessons learned from attending a session in the IEEE Visualization Conference (**5pts**)
 - Case study write up (**10pts**) - read a case study about "Hiring by Machine" and writing down your thoughts before discussions in class
 - Vega-lite assignment (**10pts**) - Embed Vega-lite visualizations in a webpage.
 - Extra Credit Assignment*: 5 extra credit

*The extra credit assignment is a user study you volunteer to participate.
- Mid-term Presentation (**15pts**) – Combining visualization and analytical storytelling to convey a clear message
 - Final Project (**20pts**) – Developing visualizations on a real-world dataset with a tool of your choice (R/ggplot, Tableau, Vega-lite, Python, D3.js, etc.)

- Visualization and analytical storytelling demo/presentation (10pts)^[11]_{SEP}
- Final project report (10pts)

Schedule Subject to Change: The standards and requirements set forth in this plan may be modified by the course instructor. Notice of such changes will be made in advance and by announcement in class.

Textbook (recommended but not required)

- Tamara Munzner. Visualization Analysis & Design. CPC Press, 2015. Web page: [https://charlotte.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991011152187904091&context=L&vid=01UNCC_INST:01UNCC_INST&lang=en&search_scope=MyInst and CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,Visualization%20Analysis%20%26%20Design&offset=0](https://charlotte.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991011152187904091&context=L&vid=01UNCC_INST:01UNCC_INST&lang=en&search_scope=MyInst%20and%20CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,Visualization%20Analysis%20%26%20Design&offset=0) [Links to an external site.](#)
- Storytelling with Data: Let's Practice, Knaflic 2020. [https://charlotte.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991011180284804091&context=L&vid=01UNCC_INST:01UNCC_INST&lang=en&search_scope=MyInst and CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,Storytelling%20with%20Data:%20Let%27s%20Practice!&offset=0](https://charlotte.primo.exlibrisgroup.com/discovery/fulldisplay?docid=alma991011180284804091&context=L&vid=01UNCC_INST:01UNCC_INST&lang=en&search_scope=MyInst%20and%20CI&adaptor=Local%20Search%20Engine&tab=Everything&query=any,contains,Storytelling%20with%20Data:%20Let%27s%20Practice!&offset=0) [Links to an external site.](#)

Supplemental Reading

- Alberto Cairo, The Truthful Art. Information graphics from a communication perspective. Blog: <http://www.thefunctionalart.com>
- Edward Tufte. The Visual Display of Quantitative Information (2nd Edition). Graphics Press, 2001.

Visualization Blogs

- Visualizing data by Andy Kirk: visualisingdata.com
- FLOWINGDATA by Nathan Yau: <https://flowingdata.com/> The Tutorials section provides good examples for developing data visualizations.
- KANTAR Information is Beautiful Awards: <https://www.informationisbeautifulawards.com> Annual awards celebrate excellence and beauty in data visualizations, infographics, interactives & information art

Grading Policy

- Grading Scale:
- A (Excellent) = 90.00% – 100.00%

- B (Good) = 80.00% - 89.99%
- C (Fair) = 70.00% - 79.99%
- D (Passing) = 60.00% - 69.99%
- U (Failing) = below 60%

Faculty may ask students to produce identification at examinations and may require students to demonstrate that graded assignments completed outside of class are their own work.