

Course Number:

INFO 4709 Section 020

Data Visualization

Instructor:

Kate Kargozari

SYLLABUS:

Fall 2025

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Course Syllabus

Course Information

- Course Name and Title: INFO 4709 Section 020, Data Visualization
- Credit Hours: 3 hours
- Class Meeting: Face-to-face, Friday, 11:00 am to 2:20 pm
- Course Duration: August 18th to December 12th
- Course Prerequisites: None

Welcome to UNT

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

Communication Guidelines

Instructor's Contact Information

- Name: KateKargozari
- Preferred Email: katekargozari@my.unt.edu
- Alternative Email: [Canvas Email](#)

Potential Office Hours

- Online via Zoom (by appointment via email)
- Zoom url: Please see the syllabus page in Canvas

Communication Expectations

Besides Weekly meetings on Fridays, students can email their course-related concerns or questions to the instructor. Emails are typically responded within 24 to 48 hours, except on weekends. Students can also get an appointment via email for the Zoom meeting if they have any questions or concerns (If your question is about any application issues, please take screenshot of the issue and attached that to your email, for all other questions please be as specific as possible in your email).

Course Format

This course takes place face-to-face; however, majority of students' works take place online. Your interaction with me and with your fellow students will take place either in the class or on Canvas. There are 15 weeks of content that you will move through. The last two weeks are for final project work. A new module will be opened at the beginning of each week.

Course Descriptions

This course is designed to enable students to combine statistical methods and graphic-centered computer-based treatment of structured and semi-structured data. It includes theoretical considerations to visual design that will enable students to use techniques and the necessary tools to visualize large sets of data and facilitate visual analysis. Well-designed data visualizations would improve comprehension, memory, inference, and decision-making. This course introduces techniques, algorithms, and tools for creating effective data visualizations based on principles and techniques from graphic design, visual art, perceptual psychology, and cognitive science. Emphasis is placed on identifying patterns, trends, and differences among data sets.

Course Objectives

After successfully completing this course:

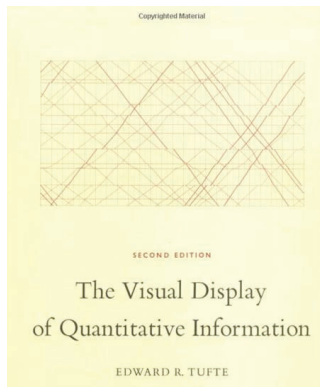
1. Master fundamentals of communication and concepts essential for effective data visualization.
2. Master selecting and applying techniques and tools to create visualizations from real-world data.
3. Master in using software tools to create both static and interactive visualizations for data from various disciplines.
4. Master using data visualization to support decision-making and enhance critical thinking.

Course Materials

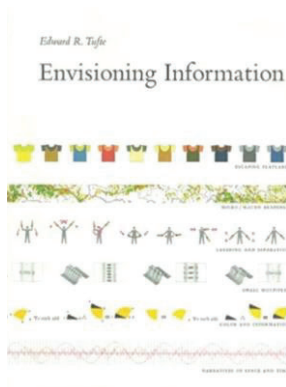
1. Weekly lectures cover fundamentals and the history of visualization.
2. Weekly labs provide instructions on using Tableau and Microsoft Excel to create various visualizations and reports. Each lab includes multiple questions to assess students' Tableau skill and a question requiring students to upload snapshots of the visualizations and results.
3. Weekly quizzes assess students' knowledge from the previous week's lecture and the lab. Each quiz consists of three questions: two from the lecture and one from the lab.
4. The final project evaluates students' knowledge and skills in Tableau and Microsoft Excel to pre-process data, create visualizations and reports from a specific data set and answer related questions.

Textbooks

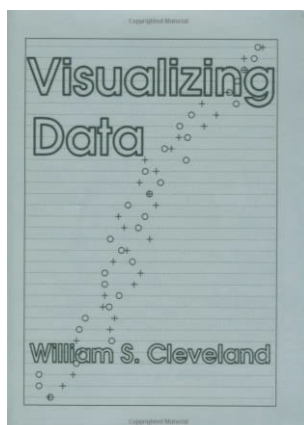
- 1- Tufte, E. R. (2001). The visual display of quantitative information (Vol. 2). Cheshire, CT: Graphics press. ISBN: 9780961392147 (required). Available on amazon.com and costs approximately \$30.



- 2- Tufte, E. R., Goeler, N. H., & Benson, R. (1990). Envisioning information (Vol. 126). Cheshire, CT: Graphics press. ISBN: 9780961392116, (required). Available on amazon.com and costs approximately \$40.



- 3- Cleveland, W. S. (1993). Visualizing data. Hobart Press. ISBN: 9780963488404, (optional). Available on amazon.com and costs approximately \$50.



- 4- Reading materials see Appendix I.

Software

The following software will be used in this course.

- Tableau
- Microsoft Excel

Course Structure and Expectations

Each week, the lecture, lab, and quiz are uploaded. Students are expected to first study the lecture thoroughly, then complete the lab. Finally, they can take the quiz to assess their understanding and aim for a good grade. This approach is designed to incrementally enhance students' comprehension and promote continuous improvement.

Minimum Technical Skills Needed

Students should be able to use the learning management system, Canvas, to access course related materials and resources, regularly check and respond to emails, create, modify, and submit files according to the instructor's guidelines (including proper file format), and download and install software as needed. Additionally, students should be familiar with the basics of Microsoft Suite (Word, Excel, Power Point).

Success in this Course

Besides weekly meetings, the instructor broadcasts the information using announcements via Canvas and students are informed through their UNT email. So, students are expected to check their emails at least once a day. They also should monitor their grades every single week and track their academic progress regularly. In cases of missed grades, students should contact the instructor within 14 days.

Course Topics and Lectures

The following is the tentative schedule with the covered topics. Actual schedule may be adjusted according to progress:

1. The Purpose of Visualization
2. Graphical Excellence and Integrity
3. Data and Image Models
4. Exploratory Data Analysis
5. Visualization Design
6. Perception
7. Interaction
8. Using Space Effectively: 2D
9. Spatial Layout
10. Color
11. Tree and Graph Visualization

Assignments and Grading

Assignment	Percentage of final grade
Practical Assignment (10 Labs)	50%
Knowledge assessment (13 quizzes)	20%
Final Project	20%

Note: addition to above percentage (90%), there is 10% for active participation in the

class. Total Percentage Possible for Semester/Grading Scale = 100

100-90 = A
89-80 = B
79-70 = C
69-60 = D
59-50 = F

Calendar

Week	Date	Lecture	Lab	Due Date
1	8/18	Introduction	Tableau Tutorial 0	-
2	8/25	Graphical Excellence	Tableau Tutorial 1	Nothing Due
3	9/1	Graphical Integrity	Tableau Tutorial 2	Quiz1(9/7)
4	9/8	Data and Image Models 1	Tableau Tutorial 3	Lab1 - Quiz2(9/14)
5	9/15	Data and Image Models 2	Tableau Tutorial 4	Lab2 - Quiz3(9/21)
6	9/22	Exploratory Data Analysis	Tableau Tutorial 5	Lab3 - Quiz4(9/28)
7	9/29	Visualization Design 1	Public Data Sets 1,2	Lab4 - Quiz5(10/5)
8*	10/6	Visualization Design 2	Tableau Tutorial 6	Lab5 - Quiz6(10/12)
9	10/13	Graphical Perception	Tableau Tutorial 7	Quiz7((10/19)
10	10/20	Interaction	Tableau Tutorial 8	Lab6 - Quiz8(10/26)
11	10/27	Space	Tableau Tutorial 9	Lab7- Quiz9(11/2)
12	11/3	Layout	Tableau Tutorial 10	Lab8 - Quiz10(11/9)
13	11/10	Color	Instruction of final project	Lab9 - Quiz11(11/16)
14**	11/17	Working on Final Project		Lab10 - Quiz12(11/23)
16***	12/1			Quiz13(12/7)

*Week 8: also the final project introduction

**Week 15: Thanksgiving Break (From 11/24-11/30, No Class this week)

***Last week (week 17, week of 12/8): the final project delivery week. You can deliver your final project any time during this week but not later than 11:59 pm on 12/10.

Final Examination

No final exam in this course. The final grade is determined by aggregating grade points from labs, quizzes, Participations and the final project.

Course Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT, implemented in summer 2015, to comply with the State of Texas House Bill 2504. Each semester, students will receive an email from UNT to their student UNT email in response to the anonymous survey. For more information, visit Office of the Provost, SPOT page: <https://vpaa.unt.edu/spot>

Technical Assistance

- Part of working with technology involves dealing with the inconveniences and frustration that can arise when it breaks down or does not perform as At UNT we have a Student Help Desk that you can contact for help with Canvas or other technical issues.
- UIT Help Desk: [UIT Student Help Desk site \(http://www.unt.edu/helpdesk/index.htm\)](http://www.unt.edu/helpdesk/index.htm).
- Email: helpdesk@unt.edu
- Phone: 940-565-2324
- Walk-in: Sage Hall, Room 330
- Regular hours are maintained to provide support to Please refer to the website for updated hours.

UNT IT Resources

- UNT Portal: <http://my.unt.edu>
- Student Computer Lab (including locations and hours of operation) can be located at: <https://computerlabs.unt.edu/location-labs>
- UNT UIT Cloud Lab: <https://it.unt.edu/cloudlab>

Course Policies

Assignment Policy

All tasks, including labs, quizzes, and the final project are documented on Canvas. Students must submit their work on Canvas in the appropriate formats according to the instructor's guidelines. Instructions for labs, quizzes, and final project as well as submission guidelines, will be communicated through Canvas.

The University is committed to providing a reliable canvas system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: helpdesk@unt.edu or 940.565.2324. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

Exam Policy

Quizzes are considered open-book examinations, but they are subject to time constraints. If a student misses a quiz deadline due to an internet connection issue, the instructor will provide an extension. Please note that makeup exams will not be granted under any circumstances. If student faces any issue, he/she needs to provide photo or the screenshot of the issue when asking for extension.

Instructor Responsibilities and Feedback

The instructor's role includes facilitating student learning and development through the following responsibilities: furnishing explicit guidance for assessments, addressing queries concerning assignments, recommending supplementary resources when needed, supplying grading criteria, and periodically reviewing and revising course content. Additionally, the instructor is accountable for promptly responding to emails and delivering assignment feedback and grades within an expected timeframe.

Late Work and Missed Work

There is no late submission of quizzes and labs otherwise with the approval of the instructor. Students are required to submit different homework each week. The final project, must be submitted by the due date, as late submission will not be accepted due to the final grade submission deadline at the end of semester.

Course Incomplete Grade

A grade of incomplete (I) will be given only for a justifiable reason (such as a serious illness or military service). It is your responsibility to contact the instructor to request an incomplete and discuss requirements for completing the course. If you do not remove the incomplete within the timeframe agreed upon with the instructor or within one calendar year, you will receive a grade of an F. Please refer to <https://registrar.unt.edu/grades/incompletes> for more information.

Attendance Policy

Students are required to attend and participate in the class.

Class Participation

Students are expected to participate in class activities such as discussion boards and chats.

Students' Responsibility for Their Learning

Students are responsible for announcements and assignments posted throughout the semester.

Syllabus Change Policy

The syllabus, course information, and due dates are subject to change.

UNT Policies

COVID-19 Related Absences

While attendance is expected as outlined above, all of us need to be mindful of the health and safety of everyone in our community, especially given concerns about COVID-19. Please contact me if you are unable to attend the online class because you are ill, or due to a related issue regarding COVID-19. You must communicate with me as soon as possible so I can determine what types of accommodation to provide. As of April 29, 2022, the university has updated its [COVID-19 guidelines](#).

Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University.

ADA Policy

UNT makes reasonable academic accommodations for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to the faculty to begin a private discussion regarding one's specific course needs. Students may request accommodation at any time; however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member before implementation in each class.

For additional information see the [ODA website](https://disability.unt.edu/) (<https://disability.unt.edu/>).

Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion. Coursework completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual records; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classrooms, labs, discussion groups, field trips, etc. Visit UNT's Code of Student Conduct to learn more.

(<https://deanofstudents.unt.edu/conduct>)

Access to Information - Eagle Connect

Students access point for business and academic services at UNT is located at: my.unt.edu. All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward email to Eagle Connect (<https://it.unt.edu/eagleconnect>).

Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" (no-reply@iasystem.org) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey, they will receive a confirmation email that the survey has been submitted. For additional information, please visit the SPOT website (<http://spot.unt.edu/>) or email spot@unt.edu.

Sexual Assault Prevention

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct, including sexual harassment sexual assault, domestic violence, dating violence, and stalking. Federal laws (Title IX and the Violence Against Women Act) and UNT policies prohibit sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking, and/or sexual assault, there are campus resources available to provide support and assistance. UNT's Survivor Advocates can assist a student who has been impacted by violence by filing protective orders, completing crime victim's compensation applications, contacting professors for absences related to an assault, working with housing to facilitate a room change where appropriate, and connecting students to other resources available both on and off campus. The Survivor Advocates can be reached at SurvivorAdvocate@unt.edu or by calling the Dean of Students Office at 940-565- 2648. Additionally, alleged sexual misconduct can be non- confidentially reported to the Title IX Coordinator at oeo@unt.edu or at (940) 565 2759.

Student Verification

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses. See UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses (<https://policy.unt.edu/policy/07-002>Links to an external site.).

Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class, and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Transmission and Recording of Student Images in Electronically Delivered Courses

No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery (for online courses).

In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.

Instructors who video-record their class lectures with the intention of re-using some or all of the recordings for future class offerings must notify students on the course syllabus if students' images may appear on the video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings. Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on the video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

No notification is needed if only audio and slide capture is used or if the video only records the instructor's image. However, the instructor is encouraged to let students know the recordings will be available to them for study purposes.

Class Recordings & Student Likenesses

Synchronous (live) sessions in this course will be recorded for students enrolled in this class section to refer to throughout the semester. Class recordings are the intellectual property of the university or instructor and are reserved for use only by students in this class and only for educational purposes. Students may not post or otherwise share the recordings outside the class, or outside the Canvas Learning Management System, in any form. Failing to follow this restriction is a violation of the UNT Code of Student Conduct and could lead to disciplinary action ([for online courses](#)).

Academic Support & Student Services Student Support Services/Mental Health

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

Student Health and Wellness Center

(<https://studentaffairs.unt.edu/student-health-and-wellness-center>)

Counseling and Testing Services

(<https://studentaffairs.unt.edu/counseling-and-testing-services>)

UNT Care Team

(<https://studentaffairs.unt.edu/care>)

UNT Psychiatric Services

(<https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry>)

Individual Counseling

(<https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling>)

Chosen Names

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

[UNT Records](#) [UNT ID Card](#)

[UNT Email Address](#) [Legal Name](#)

**UNT euIDs10 cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.*

Pronouns

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can [add your pronouns to your Canvas account](#) so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

[What are pronouns and why are they important?](#)

[How do I use pronouns?](#)

[How do I share my pronouns?](#)

[How do I ask for another person's pronouns?](#)

[How do I correct myself or others when the wrong pronoun is used?](#)

Additional Student Support Services

[Registrar \(https://registrar.unt.edu/registration\)](https://registrar.unt.edu/registration)

[Financial Aid \(https://financialaid.unt.edu/\)](https://financialaid.unt.edu/)

[Student Legal Services \(https://studentaffairs.unt.edu/student-legal-services\)](https://studentaffairs.unt.edu/student-legal-services)

[Career Center \(https://studentaffairs.unt.edu/career-center\)](https://studentaffairs.unt.edu/career-center)

[Multicultural Center \(https://edo.unt.edu/multicultural-center\)](https://edo.unt.edu/multicultural-center)

[Counseling and Testing Services \(https://studentaffairs.unt.edu/counseling-and-testing-services\)](https://studentaffairs.unt.edu/counseling-and-testing-services)

[Pride Alliance \(https://edo.unt.edu/pridealliance\)](https://edo.unt.edu/pridealliance)

[UNT Food Pantry \(https://deanofstudents.unt.edu/resources/food-pantry\)](https://deanofstudents.unt.edu/resources/food-pantry)

Academic Support Services

[Academic Resource Center \(https://clear.unt.edu/canvas/student-resources\)](https://clear.unt.edu/canvas/student-resources)

<https://www.unt.edu/success/asc> (<https://success.unt.edu/asc>)

[UNT Libraries](https://library.unt.edu/)[Links to an external site.](#) (<https://library.unt.edu/>)

<https://writingcenter.unt.edu/> (<http://writingcenter.unt.edu/Links to an external site.>)

Appendix I: Required Reading Materials. It might be updated during the class progress

- *Decision to launch the Challenger*, In Visual Explanations. Tufte. <https://magrawala.github.io/cs448b-fa17/assets/docs/challenger.pdf>
- *Graphs in Statistical Analysis*. F. J. Anscombe. The American Statistician. <http://www.jstor.org/stable/2682899>
- *Polaris*. Stolte, Tang, and Hanrahan. IEEE TVCG, 8(1), Jan 2002. http://hci.stanford.edu/cs448b/papers/Stolte_Polaris_TVCG.pdf
- *Exploratory Data Analysis*, Wikipedia. http://en.wikipedia.org/wiki/Exploratory_data_analysis
- *Perception in visualization*. Healey. <http://www.csc.ncsu.edu/faculty/healey/PP/index.html>
- *Graphical perception*. Cleveland & McGill. <http://www.jstor.org/stable/2288400>
- *Postmortem of an example*, Bertin. <https://magrawala.github.io/cs448b-fa17/assets/docs/Bertin-Postmortem.pdf>
- *Visual information seeking*, Ahlberg & Schneiderman. <ftp://ftp.cs.umd.edu/pub/hcil/Reports-Abstracts-Bibliography/3131html/3131.html>
- *Visual queries for finding patterns in time series data*, Hochheiser & Schneiderman. <ftp://ftp.cs.umd.edu/pub/hcil/Reports-Abstracts-Bibliography/2002-06html/2002-06.pdf>
- *Generalized selection via interactive query relaxation*. Heer, Agrawal & Willett. http://vis.berkeley.edu/papers/generalized_selection
- *The visual design and control of the trellis display*. Becker, Cleveland and Shyu. <http://polisci.msu.edu/jacoby/uic/manuscripts/95.8.color.pdf>
- *Graphical Methods for Data Presentation*. Cleveland. https://www.jstor.org/stable/2683401?seq=1#page_scan_tab_contents
- *Chapter 11: The Cartogram: Value-by-Area Mapping*. In Cartography. Dent. <https://magrawala.github.io/cs448b-fa17/assets/docs/Dent-Chap11.pdf>
- *A general cartographic labeling algorithm*, Edmondson, Marks & Shieber. <http://www.eecs.harvard.edu/shieber/Biblio/Papers/gen-label.pdf>
- *A survey of automated layout techniques for information presentations*, Lok and Feiner. <http://www1.cs.columbia.edu/~lok/papers/layoutsurvey.pdf>
- *Dynamic space management for user interfaces*, Bell & Feiner. <http://graphics.cs.columbia.edu/publications.newer/uist00.pdf>
- *Revision: Automated Classification, Analysis and Redesign of Chart Images*. Savva et al. <http://vis.berkeley.edu/papers/revision/>
- *Graphical Overlays: Using Layered Elements to Aid Chart Reading*. Kong and Agrawal. <http://vis.berkeley.edu/papers/grover/>
- *Extracting References Between Text and Charts via Crowdsourcing*. Kong et al. <http://vis.berkeley.edu/papers/textref/>
- *Color Naming Models for Color Selection, Image Editing and Palette Design*. Heer and Stone. <http://vis.stanford.edu/papers/color-naming-models>
- *Color guidelines*, Brewer, <http://www.personal.psu.edu/faculty/c/a/cab38/ColorSch/ASApaper.html>
- *Graph Visualization: A Survey*. Herman, Melancon, Marshall. <http://www.ivan-herman.net/professional/Publications/StarGraphVisuInfoVis.pdf>
- *Hierarchical Edge Bundles*. Holten. <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=4015425&url=http%3A%2F%2Fieeexplore.ieee.org%2Fiel5%2F2945%2F4015412%2F04015425.pdf%3Farnumber%3D4015425>

- *Improving Walkers Algorithm to Run in Linear Time*. Buchheim, Jinger & Leipert. <http://citeseerx.ist.psu.edu/viewdoc/download;jsessionid=9491D76F9CD425F47DC1DB2DE6A455EA?doi=10.1.1.16.8757&rep=rep1&type=pdf>
- *Centrality and Prestige of Social Network Analysis*. (pp. 169-198) Wasserman & Faust. <https://magrawala.github.io/cs448b-fa17/assets/docs/WassermanFaustCentrality.pdf>
- *Balancing Systematic and Flexible Exploration of Social Networks*. Perrier and Schneiderman. <http://hcil2.cs.umd.edu/trs/2006-25/2006-25.pdf>
- *The Structure and Function of Complex Networks* (Sections 1 and 2 only pp. 1-8). Newman. <http://arxiv.org/pdf/cond-mat/0303516.pdf>
- *The Social Organization of Conspiracy*. Baker and Faulkner. <http://webuser.bus.umich.edu/wayneb/pdfs/networks/Conspiracy.pdf>
- *Animated Transitions in Statistical Data Graphics*. Heer and Robertson. http://vis.berkeley.edu/papers/animated_transitions/
- *The Value of Visualization*. Van Wijk. <http://www.win.tue.nl/~vanwijk/vov.pdf>