Fall 2026 | MGT 6655-EMO

Business Data Preparation and Visualization

Instructor: Mingfeng Lin, PhD

Professor, Scheller College of Business, Georgia Tech

Class Format: Web-Based Asynchronous

TA & Office Hour info: See Canvas

Course Description

Visualizing data is an important step in understanding data, exploring relationships, and "making a case." With the abundance and relevance of data in almost any type of work, the ability to understand and interpret data has become an indispensable business skill. Data visualization has become a fast-growing industry, but the ease of creating visualizations also means that there are many charts out there that are wrong, ineffective, or misleading.

The goal of this class is to introduce principles and tools of data visualizations, and to help you create visualizations for two different but related purposes:

- **Exploration:** Helping you or other stakeholders understand data and form an opinion by creating simple charts or building a dashboard.
- **Explanation / Presentation:** Using visualizations to convince others of your opinion.

Prerequisites

- A personal computer with internet access (see Equipment section for details).
- Basic understanding of statistics such as statistical distributions.
- Familiarity with basic operations of Microsoft Excel.

Course Learning Outcomes

Upon successful completion of the class, you should be able to:

1. Identify the proper visualization for different use cases.
2. Prepare, clean, and transform data for visualization purposes.
3. Create visualizations using the tools covered in this class.
4. Use visualization tools effectively to explore data and interpret what you see.
5. Use visualizations effectively to convey findings.
6. Constructively critique visualizations you come across (pros, cons, and suggestions for improvement).

Course Materials

Primary Materials (full texts available through GT Library):

- **The Big Book of Dashboards: Visualizing Your Data Using Real-World Business Scenarios**. By Steve Wexler, Jeffrey Shaffer, and Andy Cotgreave. ISBN-13: 978-1119282716
  - GT Library
  - Companion site (data and workbooks)
- **Storytelling with Data**. By Cole Knaflic.
  - GT Library (especially pp. 179–187)
- **Better Data Visualizations**. By Jonathan Schwabish. ISBN: 978-0231193115
  - GT Library

Optional Readings / References (all available through GT Library):

- **Visualize This!** by Nathan Yau – GT Library
- **Tableau Your Data!** by Daniel G. Murray – GT Library
- **Practical Tableau** by Ryan Sleeper – GT Library
- **Recorded Course Videos** posted on Canvas.

Equipment

Students should have a personal computer (PC or Mac) with administrative rights. **A Windows PC is highly recommended.** A Chromebook is not sufficient.

Mac users may need to use the virtual/lab computer at mycloud.gatech.edu for some assignments and demos.

Please ensure your computer meets the minimum Tableau requirements: Tableau hardware requirements.

While not required, it is advisable to configure your computer to show file extensions (.docx, .twbx, .twb).

Attendance Policy

Attendance is not formally recorded for most class meetings. However, attendance is **expected** for guest-speaker sessions and all group project presentations, as these are integral to the course. Attendance may be taken on these occasions and will factor into the Class Participation component of the grade. If you must miss one of these sessions, please notify the instructor in advance to arrange an appropriate alternative.

Regular participation enriches learning through discussion, examples, and immediate clarification. If you miss a regular session, you are responsible for reviewing pre-recorded materials and consulting the TA or instructor with any questions.

Because the course is technically intensive, pre-recorded videos of lectures and demonstrations are provided on Canvas (these are not recordings of live class sessions). These materials allow you to review content at your own pace but do not replace in-class

engagement.

You do not need to attend office hours unless you have questions. If new materials arise from office-hour discussions, the instructor will summarize them and post an announcement on Ed Discussions.

Course Requirements, Assignments & Grading

Grading Items and Weights

Course grades will be determined based on 100 points from the following items:

Grading Item	Weight
Assignments*	45%
Test 1	20%
Test 2	15%
Project Presentations	10%
Participation Questions (on Ed Discussions)	10%
TOTAL	**100%**

Final Grade Scale

Points	Percentage	Letter Grade
90 and above	90% and above	A
80–89	80%–89%	B
70–79	70%–79%	C
60–69	60%–69%	D
Lower than 60	Lower than 60%	F

Other Policies and Procedures

University Use of Electronic Email

A university-assigned student email account is the official means of communication at Georgia Tech. Students are responsible for all information sent to their university-assigned email. The university recommends checking electronic communications at least twice per week.

Official Communications

Both Canvas and the class email distribution list are used to post information on class changes, upcoming assignments, grades, etc. Please ensure you can receive Canvas notifications. Communications will also be sent directly to your @gatech.edu email, especially during Canvas outages. It is **your** responsibility to keep your GT email active and check it regularly. If you do not use your GT email, forward it to an account you check several times daily and ensure it is not filtered as spam.

Plagiarism & Academic Integrity

Students are expected to act according to the highest ethical standards. Cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which sanctions will be applied. See the Georgia Tech Academic Honor Code for details.

Any student suspected of cheating or plagiarism will be reported to the Office of Student Integrity.

Copyright and Use of Course Materials

All course materials—including slides, video recordings (and their audio, screenshots, or transcripts), sample files (e.g., Tableau workbooks), and all assignment and exam questions and solutions—are for your personal educational use only.

You may not share, distribute, or reproduce these materials with any person not enrolled in the course, including posting to websites or social media, without the instructor's explicit prior written consent.

You may not upload or input course materials into external tools or platforms, including generative AI systems, if doing so would result in the materials being stored, shared, or used beyond your personal use in this course.

Accommodations for Students with Disabilities

Contact the Office of Disability Services at (404) 894-2563 as soon as possible to discuss your needs and obtain an accommodations letter. Please also email the instructor promptly.

Special Note: If you have a color vision deficiency, please let the instructor know even if you do not use ODS services. This is a visualization course that uses colors extensively, and color choices will not be penalized.

Student-Faculty Expectations Agreement

Georgia Tech strives for an atmosphere of mutual respect, acknowledgement, and responsibility. See the Student-Faculty Expectations Agreement for details. Simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek.