

Outline

Data Visualization and Exploration (STAT 4413/5413, Spring 2025)

Important dates

1/17 “No-grade” Drop deadline

4/11 Withdrawal deadline

Overview

A typical class day should feature a mix of introductory remarks, individual, pair, or small group activities, programming, and discussion, with at least one short break.

This calendar will be maintained and specific activities (assignments and dates) will be added as we go.

Weeks 2-7 are motivated by exploratory data analysis with the goal of producing “most of the way there” data visualizations. In weeks 8 and 9, we will “polish” or extend many of the graphs made to date towards more “finished” products.

Annotation

The links below are organized as follows,

- “slides” links to class slides (web format only)
- “work” links to a zip file containing followup work from class (i.e., “homework”)
- “class” links to a zip file containing template notes for class
- “post” links to a zip file containing my notes from class

Other special categories will be indicated as necessary. Due to their general importance, class notes and work are listed separately in the top menu.

Tentative outline

Week	Date	Topic	Slides, Links, References
1	1/14	Introduction, Principles, Examples (good and bad)	slides, work
2	1/21	Base R (scatter and line plots, mostly)	slides, class, post, work
3	1/28	Base R (axes, box-plots, and histograms)	slides, class, post,
4	2/4	Base R (histograms, densities, and tables)	slides, class, post
5	2/11	Data-wrangling and groupwork	slides, class, post, work

Week	Date	Topic	Slides, Links, References
6	2/18	<i>We didn't have class.</i> ¹	Snow day
7	2/25	ggplot (basic ideas and various plots, reprise)	slides, class, post
8	3/4	ggplot (annotation, reprise)	slides, class, post
9	3/11	Reflections, extensions to base R and ggplot	slides, class, post
10	3/18	Spring Break	
11	3/25	Maps I	slides, class, post, work, mid-semester
12	4/1	Work Day / Review Assignment	see "work, mid-semester" link above
13	4/8	Melton Gallery visit	6:00p-m-7:00pm, slides, gallery, links, gallery work, gallery visit
		Normal class (Maps II)	7:20p-m-8:45pm, slides, buddy
14	4/15	Dashboards (Shiny / Observable JS)	slides, dashboards, class
15	4/22	Dashboards II	slides, deployment
16	4/29	Summary / Special Topics	slides, finale
Finals	5/6 (5:30-7:20 pm)		final project

¹You have no explicit obligations here. We will squish some things together and make it all fit within the confines of the time we have.