

# Schedule

## Course Schedule

*subject to change*

| Week | Topic                                      | Tools                             |
|------|--|-----------------------------------|
| 1    | Course Introduction                        | Scripts; R and RStudio            |
| 2    | Reproducible Data Analyses                 | Filesystems; Version Control; Git |
| 3    | Data Structure & Wrangling                 | Markup; Data Formats              |
| 4    | Tidy Data                                  | Tidyverse                         |
| 5    | Flow Control                               | Loops                             |
| 6    | Data Visualization I                       | Grammar of Graphics; ggplot2      |
| 7    | Data Visualization II                      | ggplot2                           |
| 8    | <b>Midterm Exam (Thursday, October 16)</b> |                                   |
| 9    | Social Networks & Network Data             | iGraph; statnet                   |
| 10   | Census Data                                | tidycensus                        |
| 11   | Maps & GIS I                               | sf; tigris                        |
| 12   | Maps & GIS II                              | mapgl; mapbox; osm                |
| 13   | Accessing & Using External Data            | SQL, other APIs                   |
| 14   | Project Work                               |                                   |
| 15   | Project Presentations                      |                                   |
| F    | <b>Finals Week (Project Due)</b>           |                                   |

*Advanced Topics (if we have time)*

| Week | Topic                     | Tools | Reading |
|------|---------------------------|-------|---------|
| 16   | Text Data & Data Scraping |       |         |

| Week | Topic                               | Tools | Reading |
|------|-------------------------------------|-------|---------|
| 17   | Web Apps & Visualization            |       |         |
| 18   | AI Pair Programming & “Vibe Coding” |       |         |
| 19   | Local LLMs                          |       |         |