Tentative Course Plan for STAT 412/612

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- Week 1:

  - Chapters 1, 2, 4, 10, and 27 of RDS
  - Install all tools for the semester.
  - R in the context of Data Science.
  - Proper file system organization.
  - Basics of R
  - Basics of R Markdown
  - Data Frames
  - Logicals

- Week 2:

  - Chapters 6, 17, 18, and 19 of RDS
  - Using pipes (magrittr)
  - Creating functions
  - R Scripts

- Week 3:

  - Chapter 3 of RDS
  - Data visualization and ggplot2.

- Week 4:

  - Chapter 5 of RDS
  - Manipulating data frames.
  - Calculating summary statistics.
  - dplyr

- Week 5:

  - Chapters 7 and 11 of RDS
  - Data import/export.
  - Exploratory Data Analysis (EDA).
  - EDA exercise.

- Week 6:

  - Midterm exam covering weeks 1 through 4.

- Week 7:

  - Chapter 12 of RDS
  - Tidying data
  - tidyr

- Week 8:

  - Git Appendix in r-pkgs
  - Happy git with R
  - Setting up GitHub Classroom
  - Git and GitHub.

- Week 9:

- – Chapter 13 of RDS
  - – Relational Data
  - – SQL?

- Week 10:

  - – Chapter 14 of RDS
  - – Strings and regular expressions

- Week 11:

  - – Data munging lab.

- Week 12:

  - – Midterm exam covering weeks 5, 7, 8, 9, and 10.

- Week 13:

  - – Chapters 15 and 16 of RDS
  - – Factors (forcats)
  - – Dates/Times (lubridate)

- Week 14

  - – TBD. Possible topics:
    - * Make your own website (personal/project) in R (Chapter 10 of R Markdown Book).
    - * Making presentations using R Markdown (Chapter 4 or R Markdown Book).
    - * Plotting spatial data in R (Chapter 9 of Case Studies Book).
    - * Linear/Logistic Regression in R.

- Week 15

  - – Project Presentations