Dates Lab

David Gerard

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Instructions

- Add your solutions to this file.
- Commit after you complete each question.
- When you are done, push to GitHub.
- Learning Objectives:
  - Practice `lubridate`.
  - More practice with `dplyr` and `tidyr`.

Capital Bikeshare

For this exercise, we will use the data from `capital_trips_2016.csv` found at https://dcgerard.github.io/stat_412_612/data/capital_trips_2016.csv.

1. Read these data into R.
2. Rename variables to conform to our guidelines on variable names.
3. Parse the start date and end date variables to be date-times if they aren't already.
4. Use the start date and end date variables to calculate the duration of each trip. See if this duration is in agreement with the duration (ms) variable provided in the data set. Can you explain any discrepancies?
5. If you found any discrepancies in part 3, fix them now.
6. How much time elapsed between the start of the first trip and the end of the the last trip.
7. Is a trip's duration associated with the hour of day? Make a plot to explore.
8. What is the distribution of durations? Make a plot.
9. What is the longest trip taken (in hours)? Between which stations was this trip taken?