Tidyverse flow of the workshop

1. Basics
   1. Project organization
   2. Controlled vocabulary
   3. R, RStudio and tidyverse
   4. Annotating code and outline
   5. <- assignment operator
   6. %>% piping and me getting up in day
2. Reading in files
   1. Point and click to read in files
   2. Read\_csv and tab
   3. Issues with reading in files
      1. Missing values and guess\_max =
   4. Janitor
      1. Issues with odd characters and spaces in variable names
   5. Writing files to csv file
   6. Read\_excel or Read\_delim – other ways to read files
3. Graphing of data – basics
   1. Wide format graphing
      1. Layers and basics
   2. Long format graphing
      1. Mapping color, fills, shapes
      2. Labels
      3. Facets
      4. Etc
   3. Other geometries for graphs –
   4. Summary Stats Graphs
   5. GGPlotly – how to look for outliers.
4. Mutating data
   1. Summary stats – skimr
   2. Grouping of data
   3. Simple math and stats
   4. If else and Case When changing data
   5. Paste and separate with data
5. Dates and times
   1. How to convert to POSIXct
   2. Getting different parts of dates
   3. Time zones – maybe or not
   4. Rounding time
   5. Excel date times with Janitor – HOW TO DO EXCEL DATE
6. Filtering and Selecting data
   1. Boolean operators
   2. Filtering date time ranges
7. Pivoting wide to long and back
8. Factors and forecats
   1. Why factors
   2. How to use and modify reorders
9. Advanced graphing and GGPLOT for publication
   1. Fancy labels
   2. Scales for date and times
   3. Modifying legend and colors and labels
   4. Facet\_wrap and facet\_grid
   5. Fancy labels for facet labels
   6. PATCHWORK???
10. Things I can’t get to
    1. Heat maps
    2. Heat maps with changing depths
    3. Statistics