005 - Data Graphics

EPIB 607 - FALL 2020

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Objective

- Understand the building blocks of visualizing data

Visualizing data: Mapping data onto aesthetics

What is Data Visualization?

- In its most basic form, visualization is simply mapping data to geometry and color.
- It works because your brain is wired to find patterns, and you can switch back and forth between the visual and the numbers it represents.
- This is the important bit. You must make sure that the essence of the data isn't lost in that back and forth between visual and the value it represents because if you can't map back to the data, the visualization is just a bunch of shapes.

Session Info

```
R version 3.6.2 (2019-12-12)
Platform: x86_64-pc-linux-gnu (64-bit)
Running under: Pop!_OS 19.10

Matrix products: default
BLAS:   /usr/lib/x86_64-linux-gnu/openblas/libblas.so.3
LAPACK: /usr/lib/x86_64-linux-gnu/libopenblasp-r0.3.7.so

attached base packages:
[1] tools     stats     graphics  grDevices utils     datasets  methods
[8] base

other attached packages:
 [1] NCStats_0.4.7      FSA_0.8.30         forcats_0.5.0      stringr_1.4.0
 [5] dplyr_1.0.2        purrr_0.3.4        readr_1.3.1        tidyr_1.1.2
 [9] tibble_3.0.3       ggplot2_3.3.2.9000 tidyverse_1.3.0    knitr_1.29

loaded via a namespace (and not attached):
 [1] Rcpp_1.0.4.6       highr_0.8          plyr_1.8.6         cellranger_1.1.0
 [5] pillar_1.4.6       compiler_3.6.2     dbplyr_1.4.2       TeachingDemos_2.12
 [9] jsonlite_1.7.0     lubridate_1.7.4    evaluate_0.14      lifecycle_0.2.0
[13] gtable_0.3.0       pkgconfig_2.0.3    rlang_0.4.7        reprex_0.3.0
[17] cli_2.0.2          rstudioapi_0.11    DBI_1.1.0          haven_2.3.1
[21] xfun_0.16          withr_2.2.0        xml2_1.3.0         httr_1.4.1
[25] fs_1.3.2           generics_0.0.2     vctrs_0.3.4        hms_0.5.3
[29] grid_3.6.2         tidyselect_1.1.0   glue_1.4.2         R6_2.4.1
[33] fansi_0.4.1        readxl_1.3.1       modelr_0.1.5       magrittr_1.5
[37] backports_1.1.9    scales_1.1.1       ellipsis_0.3.1     rvest_0.3.5
[41] assertthat_0.2.1   colorspace_1.4-1   stringi_1.4.6      munsell_0.5.0
[45] broom_0.7.0        crayon_1.3.4
```