Week_6_Visualizing_data

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LO:

1. Use ggplot2 for data visualization.
2. Think critically about data visualization choices.

Notes:

- Layers

1. data and aesthetic mapping. Data must be a data frame.
2. a statistical transformation (stat).
3. a geometric object (geom).
4. a position adjustment.

```
ggplot(data=diamonds, aes(x=carat, y=price, group= cut))
+ geom_point(stat= "identity", aes(colour= cut), position = "identity" )
```

- Dataset

Old dataset can be replaced with %+%

```
p <- ggplot(mtcars, aes(mpg, wt, colour = cyl)) + geom_point()
P
mtcars <- transform(mtcars, mpg = mpg ^ 2)
p %+% mtcars
```

- Aesthetics mapping

aes()

- Setting vs mapping

map: (aes(color = “darkblue”)) # creates a new variable called darkblue.

set: (color = “darkblue”) # a parameter of color darkblue.

- Stat (statistical transformation): PPT 14/36

identity: don’t transfer data.

- geom: PPT 16/36, 18/36
- group = ...
- position adjustment: PPT 21/36
- overplotting: PPT 22/36 # use alpha value to adjust transparency.
- faceting: PPT 23/36 #facet_grid(), facet_wrap().
- scale

color scale: PPT 29/36

- title: labs()
- Save a plot to a file

```
png(file="my_plot.png", width=500, height=500, units="px")
d <-ggplot(diamonds, aes(carat)) + xlim(0, 3)
d + stat_bin(aes(size = ..density.., colour=..density..), binwidth= 0.1, geom= "point", position="ident
dev.off()
```

- Get data from ggplot

  ```
  library(ggplot2)
  data("diamonds")
  ```