ggplot ( ) +

geom\_point ( ) +

geom\_smooth ( ) +

labs ( ) +

geom\_bar ( ) +

ggsave ( )

**ggplot**

* (data = df, aes( x=\_, y=\_) +

**geom\_point()** = adds dots for the data (scatter plot)

* mapping = NULL
* data = NULL
* position = position\_jitter or “jitter”
* aes()
  + **x** =
  + **y** =
  + alpha = translucency
  + colour = variable\_to\_group\_color\_by
  + fill =
  + group =
  + shape = variable\_to\_group\_shape\_by
  + size = variable\_to\_group\_size\_by
  + stroke =
* color = “black” or “#139504” (set a defined color for all)
* size = 3 (set a defined size for all)
* na.rm = FALSE (missing values removed w/ a warning) or TRUE (missing values removed silently)
* show.legend = TRUE or FALSE to include this layer in the legends

**geom\_smooth** = adds trendline to the data

**geom\_hline()** = adds horizontal line to chart

* aes()
  + yintercept = value for horizontal line
  + color = “label of line in the legend”
* linetype = “type of line” (solid, dashed, )

**geom\_vline()** = adds vertical line to chart

* aes()
  + xintercept = value for vertical line
  + color = “label of line in the legend“
* linetype = “type of line” (solid, dashed, )
* size =

**labs()** = Modify axis, legend, and plot labels(Note: to remove a label, set it = NULL)

* ggtilte() or title= “text at top of graph”
* subtitle = “text underneath title”
* caption = “text in bottom-right of plot”
* tag = “text in top-left of plot” (ex. A)
* color = “Title of color legend”
* ylab() or y= “y-axis label”
* xlab() or x= “x-axis label”

**geom\_bar()** = Bar charts

Note:

* **geom\_bar** makes the height of the bars proportional to the # of cases in each group, uses stat\_count() by default (counts the # of cases at each x position)
* **geom\_col** makes the heights of the bars to represent values in the data, uses stat\_identity() by default (leaves the data as is)
* **geom\_histogram** = For continuous data
* mapping = NULL
* data = NULL
* position = position\_jitter or “jitter”
  + position\_stack() = stack multiple bars occupying the same x position atop one another
  + position\_dodge() = to dodge multiple bars occupying the same x position side-by-side
  + position\_fill() = shows relative proportions at each x by stacking bars, and then standardizing each bar to have the same height
* just = 0.5 (default, columns centered about axis breaks); 0-1 (to place columns to the left/right of axis breaks)
* width = bar width
* na.rm = FALSE (missing values removed w/ a warning) or TRUE (missing values removed silently)
* orientation = NA (defaults to x); “x” or “y”
* show.legend = TRUE or FALSE to include this layer in the legends
* geom, stat = overrides the default connection between geom\_bar() and stat\_count()
* aes()
  + x =
  + y =
  + alpha
  + colour = outline color
  + fill = inside color
  + group
  + linetype
  + linewidth

**hist(**data**)** = Histogram

**ggsave()** = Save a ggplot

* filename (file name to create on a disk)
* plot = the plot to save
* device = “png”, “pdf”, “jpeg”, “tiff”, “png”…
* path = path to save plot to (combined w/ filename)
* scale = 1
* width =
* height =
* units = (“in”, “cm”, “mm” for the width/height)
* dpi = plot resolution
* limitsize = TRUE (default; won’t save images larger than 50x50 inches)