final.R

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library(ggplot2)  
library(readxl)  
  
  
hw <- theme\_gray()+ theme(  
 plot.title=element\_text(hjust=0.5),  
 plot.subtitle=element\_text(hjust=0.5),  
 plot.caption=element\_text(hjust=-.5),  
   
 # strip.text.y = element\_blank(),  
 strip.background=element\_rect(fill=rgb(.9,.95,1),  
 colour=gray(.5), linewidth=.2), #changed size to linewidth for ggplot2 3.4.0  
   
 panel.border=element\_rect(fill=FALSE,colour=gray(.70)),  
 panel.grid.minor.y = element\_blank(),  
 panel.grid.minor.x = element\_blank(),  
 panel.spacing.x = unit(0.20,"cm"),  
 panel.spacing.y = unit(0.20,"cm"),  
   
 # axis.ticks.y= element\_blank()  
 axis.ticks=element\_blank(),  
 axis.text=element\_text(colour="black"),  
 axis.text.y=element\_text(margin=margin(0,3,0,3)),  
 axis.text.x=element\_text(margin=margin(-1,0,3,0))  
)  
  
  
  
  
# Read the data  
insurance\_data <- read\_excel("C:/Users/Bhargav Dasari/Documents/SPRING-2024/STAT-515/MIDTERM/MID TERM DATA.xlsx")  
  
# Define revenue ranges and reverse their order  
# Define revenue ranges  
insurance\_data$Revenue\_Group <- cut(insurance\_data$`REVENUE IN BILLION DOLLARS`,  
 breaks = c(-Inf, 1, 2, 4, Inf),   
 labels = c("<1", "1-2", "2-4", ">4"),  
 right = FALSE,  
 ordered\_result = TRUE)  
  
# Reorder company levels by revenue in ascending order  
insurance\_data$COMPANY <- factor(insurance\_data$COMPANY, levels = insurance\_data$COMPANY[order(insurance\_data$`REVENUE IN BILLION DOLLARS`)])  
  
  
# Define your custom fill colors  
custom\_colors <- c("<1" = "#a6cee3", "1-2" = "#1f78b4", "2-4" = "#b2df8a", ">4" = "#33a02c")  
  
ggplot(insurance\_data, aes(x = `REVENUE IN BILLION DOLLARS`, y = COMPANY, fill = Revenue\_Group)) +  
 geom\_bar(stat = "identity", position = position\_dodge(width = 0.8)) +  
 labs(x = "Revenue (Billion Dollars)", y = "Company",   
 title = "Top 25 Business Insurance Firms in the U.S. by Revenue Group",  
 fill = "Brokerage Revenue") + # Change legend title to "Brokerage Revenue"  
 scale\_fill\_manual(values = custom\_colors, guide = guide\_legend(reverse = TRUE)) + # Use custom colors  
 theme\_minimal() + hw +  
 theme(axis.title.x = element\_text(margin = margin(t = 20)),   
 legend.position = "right",  
 plot.title = element\_text(hjust = 0.5)) # Adjust the title to be centered

