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RPubs URL : [RPubs - Data Visualisation Assignment-2](https://rpubs.com/hill/814610)

**Code :**

library(ggplot2)

library(dplyr)

library(readxl)

df\_1 <- read.csv("C:/Users/Admin/Downloads/companiesmarketcap.com - Largest pharma companies by market cap.csv")

# data preparation

df\_1 <- df\_1 %>% arrange(desc(marketcap))

df\_1 <- head(df\_1,50)

# converting marketcap in Billion

df\_1$marketcap <- round(df\_1$marketcap/1000000000,2)

df\_1$country <- factor(df\_1$country)

levels(df\_1$country)

# assign regions

df\_1$region[df\_1$country=="Australia"] <- "Oceania"

df\_1$region[df\_1$country=="China"] <- "Asia"

df\_1$region[df\_1$country=="Denmark"] <- "Europe"

df\_1$region[df\_1$country=="France"] <- "Europe"

df\_1$region[df\_1$country=="Germany"] <- "Europe"

df\_1$region[df\_1$country=="India"] <- "Asia"

df\_1$region[df\_1$country=="Ireland"] <- "Europe"

df\_1$region[df\_1$country=="Japan"] <- "Asia"

df\_1$region[df\_1$country=="Netherlands"] <- "Europe"

df\_1$region[df\_1$country=="South Korea"] <- "Asia"

df\_1$region[df\_1$country=="Switzerland"] <- "Europe"

df\_1$region[df\_1$country=="United Kingdom"] <- "Europe"

df\_1$region[df\_1$country=="United States"] <- "North America"

df\_1$region <- factor(df\_1$region)

levels(df\_1$region)

# creating region-wise ranking

df\_1$asia = ifelse(df\_1$region == "Asia",df\_1$Rank,NA)

df\_1$asia\_rank <- rank(df\_1$asia, ties.method = "min", na.last = "keep")

df\_1$america = ifelse(df\_1$region == "North America",df\_1$Rank,NA)

df\_1$america\_rank <- rank(df\_1$america, ties.method = "min", na.last = "keep")

df\_1$europe = ifelse(df\_1$region == "Europe",df\_1$Rank,NA)

df\_1$europe\_rank <- rank(df\_1$europe, ties.method = "min", na.last = "keep")

df\_1$oceania = ifelse(df\_1$region == "Oceania",df\_1$Rank,NA)

df\_1$oceania\_rank <- rank(df\_1$oceania, ties.method = "min", na.last = "keep")

df\_1$region\_rank = rowSums(df\_1[,c("asia\_rank", "america\_rank", "europe\_rank", "oceania\_rank")], na.rm=TRUE)

df\_1 <- df\_1[,-c(8:15)]

# colour definations

color\_pallate <- c("#466080", #asia

"#29265b", #europe

"#89141c", #north america

"#b16264") #oceiana

p1 <- ggplot(data = df\_1, aes(x = reorder(Name, marketcap), y = marketcap, fill = region)) +

# gg bar plot

geom\_bar(stat="identity") +

# adding world's rank to each company

geom\_text(aes(label = `Rank`, y = 0),

hjust = "top",

fontface = "bold") +

# adding company's market-capitalisation

geom\_text(aes(label = paste(marketcap)),

nudge\_y = 10, nudge\_x = 0,

fontface = "bold") +

# adding region-wise rank to each company

geom\_text(aes(label = paste(region\_rank)),

colour = "white",

nudge\_y = -10, nudge\_x = 0,

fontface = "bold") +

# adding title, subtitle, caption, axis

labs(title = "Top 50 Largest Pharmaceutical Companies in the world by Market Capitalization",

subtitle = "North America and Europe dominates the top hierarchy as they accounts 19 of the top 20 Pharmaceutical Companies",

y = "Market Capitalization in Billion USD",

caption = "The original source provides a list of healthcare companies that work closely with pharmaceuticals, including bioteck, pharmaceutical retailers, clinical laboratories, etc

Data Source: https://companiesmarketcap.com/pharmaceuticals/largest-pharmaceutical-companies-by-market-cap/

Visualization sources: Deshmukh,A.(2021, September 17). Visualizing the World’s Biggest Pharmaceutical Companies.Retrieved from Visual Capitalist:https://www.visualcapitalist.com/worlds-biggest-pharmaceutical-companies/") +

# adding note for region-wise ranking

annotate("text", x = 35, y = 300 , size = 5,

label = "The White coloured digit on each bar denotes Company's rank in

respective region",

fontface = "bold.italic") +

# assigning colours to regions

scale\_fill\_manual(values = color\_pallate) +

# describing theme

theme\_grey() +

theme(plot.title = element\_text(face = "bold",

size = 20,

hjust = 0.5),

plot.subtitle = element\_text(face = "bold",

size = 15),

plot.caption = element\_text(size = 15,

hjust = 0),

axis.title.x = element\_text(size = 20),

axis.text.x = element\_text(size = 15,

face = "bold"),

axis.text.y = element\_text(size = 10,

face = "plain"),

axis.title.y = element\_blank(),

legend.title = element\_blank(),

legend.key.size = unit(1,'cm'),

legend.text = element\_text(size = 15)) +

# flipping the co-ordinates

coord\_flip()

**Reference :**

Class lectures-labs (Chapter 1 - 6)