Some output omitted if unnecessary.

> require("xlsx")

> require("ggplot2")

1.)

> CEODataFile <- loadWorkbook("F:\\Téléchargements\\CEO.xlsx")

> CEODataSheet <- readWorksheet(CEODataFile, sheet="CEO\_Data")

2.)

> CEOSalaryData <- readWorksheetFromFile("F:\\Téléchargements\\CEO.xlsx", sheet = "CEO\_Data", region = "N1:P801")

> CEOSalaryData$Other. <- as.numeric(CEOSalaryData$Other.)

> CEOSalaryData[is.na(CEOSalaryData)] <- 0

> CEOSalaryData$TotalSal <- rowSums(CEODataSalary)

> head(CEOSalaryData)

Salary. Bonus. Other. TotalSal

1 600000 NA 300 600300

2 796935 624000 66669 1487604

3 675000 450000 383184 1508184

4 830000 800000 1645320 3275320

5 559477 495100 33569 1088146

6 650833 330000 118175 1099008

> CEOSalaryData[is.na(CEOSalaryData)] <- 0

> CEOSalaryData$SalPercent[is.na(CEOSalaryData$SalPercent)] <- 0

> CEOSalaryData$BonusPercent[is.na(CEOSalaryData$BonusPercent)] <- 0

> sum(CEOSalaryData$SalPercent) / length(CEOSalaryData$SalPercent)

[1] 52.7383

> sum(CEOSalaryData$BonusPercent) / length(CEOSalaryData$BonusPercent)

[1] 27.91472

3.)

> CEODegrees <- CEODataSheet[c("MBA", "MSPhD")]

> sapply(CEODegrees, function(x) {sum(x) / length(x) \* 100})

MBA MSPhD

26.375 50.500

4.)

> CEOStates <- as.data.frame(table(CEODataSheet$STofBirth))

> head(CEOStates)

Var1 Freq

1 AK 1

2 AL 12

3 AR 12

4 AZ 4

5 CA 29

6 CO 6

> ggplot() + geom\_bar(aes(x = CEOStates$Var1, y = CEOStates$Freq, width = 1.0), stat = "identity")

+ xlab("States") + ylab("Occurrence of State")

+ theme(panel.background = element\_blank(), plot.title = element\_text(size = 20, face = "bold"), legend.position = "none")

+ ggtitle("Occurences of CEO Per State") + geom\_text(aes(35.1, 110, label = "New York", color = "red"))

> CEOStates <- CEOStates[order(-CEOStates[, "Freq"]),]

> head(CEOStates, n = 1)

Var1 Freq

35 NY 106

5.)

> calcCorr <- function (x, y) {

+ len <- length(x$TotalSal)

+ totalComp <- x$TotalSal

+ IndustryAvgs <- data.frame(salesCor = rep(NA, 1),

+ profitsCor = rep(NA, 1),

+ roiCor = rep(NA, 1))

+

+ IndustryAvgs$salesCor <- cor(totalComp, y$Sales.)

+ IndustryAvgs$profitsCor <- cor(totalComp, y$Profits.)

+ IndustryAvgs$roiCor <- cor(totalComp, y$Return5Yrs)

+

+ return(IndustryAvgs)

+ }

> calcCorr(CEOSalaryData, CEODataSheet)

salesCor profitsCor roiCor

1 0.1682924 0.1672462 0.05313964

6.)

> avgSals <- function (data) {

+ len <- length(unique(data$Industry))

+ IndustryAvgs <- data.frame(Industry = unique(data$Industry), AvgSal = rep(NA, len), stringsAsFactors = FALSE)

+ FreqTable <- as.data.frame(table(data$Industry))

+

+ for(i in 1:len) {

+ industry <- IndustryAvgs$Industry[i]

+ out <- (split(data, data$Industry == industry))["TRUE"]

+ freq <- (FreqTable[FreqTable$Var1 == industry,])$Freq

+

+ IndustryAvgs$AvgSal[i] <- sum(out[[1]]$TotalSal) / freq

+ }

+

+

+ return(IndustryAvgs[order(-IndustryAvgs[, "AvgSal"]),])

+

+ }

> avgSals(CEOSalaryData)

Industry AvgSal

1 Aerospacedefense 3236332.8

10 Entertainment 2532692.6

2 Business 2079562.4

7.)

> CEOTotal$Yrs <- CEODataSheet$YrsCEO

> CEOTotal$TotalSal <- CEOSalaryData$TotalSal

> mapply(function(x) {x / 1000}, CEOTotal$TotalSal)