# Install and load packages for use

install.packages("ggplot2")

library(ggplot2)

install.packages("lattice")

library(lattice)

# Create XY point plot graphs to visualise the correlation between crime and relevant variables

xyplot(SIMD.2020\_Clean$SIMD\_Crime.Count ~ SIMD.2020\_Clean$University.Qual,

xlab = "Percentage of Population holding University qualifications",

ylab = "Recorded instances of crime",

main = "Visualisation of crime relative to higher education",

col = "red")

xyplot(SIMD.2020\_Clean$SIMD\_Crime.Count ~ SIMD.2020\_Clean$Working.Age.Population,

xlab = "Number of working age individuals",

ylab = "Recorded instances of crime",

main = "Visualisation of crime relative to working age population",

col = "blue")

# Create a multi-variable matrix plot graph to visualise correlation between targeted SIMD data

names <- c("SIMD\_Overall.Rank", "SIMD\_Crime.Count", "Population",

"Working.Age.Population", "WA.POP.PCT", "University.Qual")

matrix.1 <- SIMD.2020\_Clean[,names]

splom(matrix.1)

# Create boxplot graphs of filtered Service Accessibility based on Date and Destination; Access time from Public Transportation

bwplot(Filter2015.GP.Public$Value..Mean.Minutes.,

main = "Mean minutes to G.P. accessing public transit, 2015", col = "red")

bwplot(Filter2018.GP.Public$Value..Mean.Minutes.,

main = "Mean minutes to G.P. accessing public transit, 2018", col = "blue")

bwplot(Filter2015.PO.Public$Value..Mean.Minutes.,

main = "Mean minutes to Post Office accessing public transit, 2015", col = "red")

bwplot(Filter2018.PO.Public$Value..Mean.Minutes.,

main = "Mean minutes to Post Office accessing public transit, 2018", col = "blue")

bwplot(Filter2015.RC.Public$Value..Mean.Minutes.,

main = "Mean minutes to Retail Centre accessing public transit, 2015", col = "red")

bwplot(Filter2018.RC.Public$Value..Mean.Minutes.,

main = "Mean minutes to Retail Centre accessing public transit, 2018", col = "blue")