(Linear Regression for Machine Learning)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Height | 128 | 132 | 140 | 150 | 170 | 175 | 180 | 195 | 199 |
| Weight | 47 | 51 | 55 | 58 | 65 | 66 | 69 | 75 | 78 |

Question 1: Create Relationship Model using Height and Weight

height <- c(128,132,140,150,170,175,180,195,199)

weight <- c(47,51,55,58,65,66,69,75,78)

relationship <- lm(weight~height)

Question 2: Show the summary of the Relationship

summary(relationship)

Question 3: Predict the weight of new person’s height=172

predict <- data.frame(height = 172)

weight <- predict(relationship,new)

weight

Question 4: Visualize the Regression Graphically

png(file = "linearregression.png")

plot(height,weight,col = "blue",main = "Height & Weight Regression",

abline(lm(weight~height)),cex = 1.3,pch = 16,xlab = "Weight in Kg",ylab = "Height in cm")

dev.off()

