HackerRank Assignments

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Contents

Laptop Battery Life

Problem Statement

How long Fred will be able to watch TV with giver charge.

Solutions

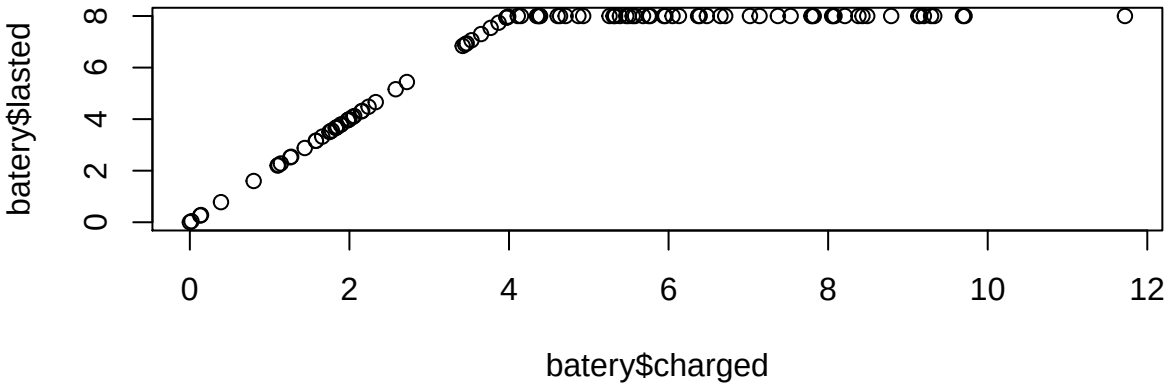
To solve this I will do following test with current dataset.

1. **Corelations Plot**
2. **Linear regression**

Using above analysis I belive I can predict how long battery will last.

Corelation Plot

```
library(graphics)
batery <- read.csv("https://s3.amazonaws.com/hr-testcases/399/assets/trainingdata.txt")
colnames(batery) <- c("charged","lasted")
plot(batery$charged,batery$lasted)
```



It was clear from graph that charger charged <= 4 hours have 100% corelation and > 4 hours battery will last always 8 hours.

Linear regression

This problem statement not at all required linear regression because it was clear from above graph that charger charged <= 4 hours have 100% corelation and > 4 hours battery will last always 8 hours.

Hacker Rank R code

```r
# Hacker rank submission link https://www.hackerrank.com/challenges/battery/submissions/code/38404203
input <- readLines('stdin', n=1, warn=FALSE)
input <- as.numeric(input)
write(ifelse(input > 4, 8, input * 2),stdout())
```

Competition Score

I had scored 10 out of 10 in hacker rank.

Conclusion

Fred 4 hours charging is enough for you to get better performance because more than 4 hours charging does not increase any performance.

Predicting House Prices

Problem Statement

Estimate house price per square feet for Charlie.

Solutions

Its clearly linear regression problem with multiple features.

Hacker Rank R code

```r
# Hacker rank submission link https://www.hackerrank.com/challenges/predicting-house-prices/submissions/
rawinput <- read.table("stdin",fill = TRUE, header = FALSE)
row <- as.numeric(rawinput[1,2])
train <- rawinput[2:(row+1),]
train <- as.data.frame(train)
colnames(train)[3] <- "Price"
test <- rawinput[(row+3):nrow(rawinput),c(1,2)]
test <- as.data.frame(test)
fit <- lm(Price ~ V1 + V2, data = train)
output <- round(predict(fit, test), digits = 2)
write(output,stdout(), sep = "\n")
```

Sample Input

2 7

0.18 0.89 109.85

1.0 0.26 155.72

0.92 0.11 137.66

0.07 0.37 76.17

0.85 0.16 139.75

0.99 0.41 162.6

0.87 0.47 151.77

4

0.49 0.18

0.57 0.83

0.56 0.64

0.76 0.18

Sample Output

105.22

142.68

132.94

129.71