Regression linear Arthur WEHBE cryptocurencies dataset

2024-03-23

```
data <- read.csv("all_currencies.csv")

data <- subset(data, select = -c(X, Symbol, Market.Cap))

head(data)
```

```
##         Date    Open    High     Low   Close Volume
## 1 2015-11-12 1.3e-05 1.7e-05 1.3e-05 1.7e-05    142
## 2 2015-11-13 1.7e-05 3.3e-05 1.6e-05 2.4e-05     85
## 3 2015-11-14 2.4e-05 5.3e-05 2.3e-05 3.0e-05    131
## 4 2015-11-15 3.0e-05 6.3e-05 2.2e-05 3.5e-05    132
## 5 2015-11-16 3.5e-05 4.6e-05 3.2e-05 3.6e-05    280
## 6 2015-11-17 3.6e-05 4.4e-05 3.3e-05 3.4e-05    194
```

```
plot(data$Open, data$Close,
     pch=19,
     col='blue',
     main="Scatterplot of \n Open vs. Close",
     xlab='Open',
     ylab="Close")

corr.coef <- cor(data$Open, data$Close)
corr.coef
```

```
## [1] 0.9120733
```

```
model <- lm(data$Close ~ data$Open)
summary(model)
```

```
##
## Call:
## lm(formula = data$Close ~ data$Open)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -1198292      -18      -18      -18  1211695
##
## Coefficients:
##              Estimate Std. Error  t value Pr(>|t|)
## (Intercept) 1.840e+01  4.491e+00    4.096 4.21e-05 ***
## data$Open   9.004e-01  5.091e-04 1768.682  < 2e-16 ***
## ---
```

```
## Signif. codes:  0 ’***’ 0.001 ’**’ 0.01 ’*’ 0.05 ’.’ 0.1 ’ ’ 1
##
## Residual standard error: 3570 on 632216 degrees of freedom
## Multiple R-squared:  0.8319, Adjusted R-squared:  0.8319
## F-statistic: 3.128e+06 on 1 and 632216 DF,  p-value: < 2.2e-16
```

```
abline(model, col="red")
```