

DataIO

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```
library(readr)
```

```
## Warning: package 'readr' was built under R version 4.1.2
```

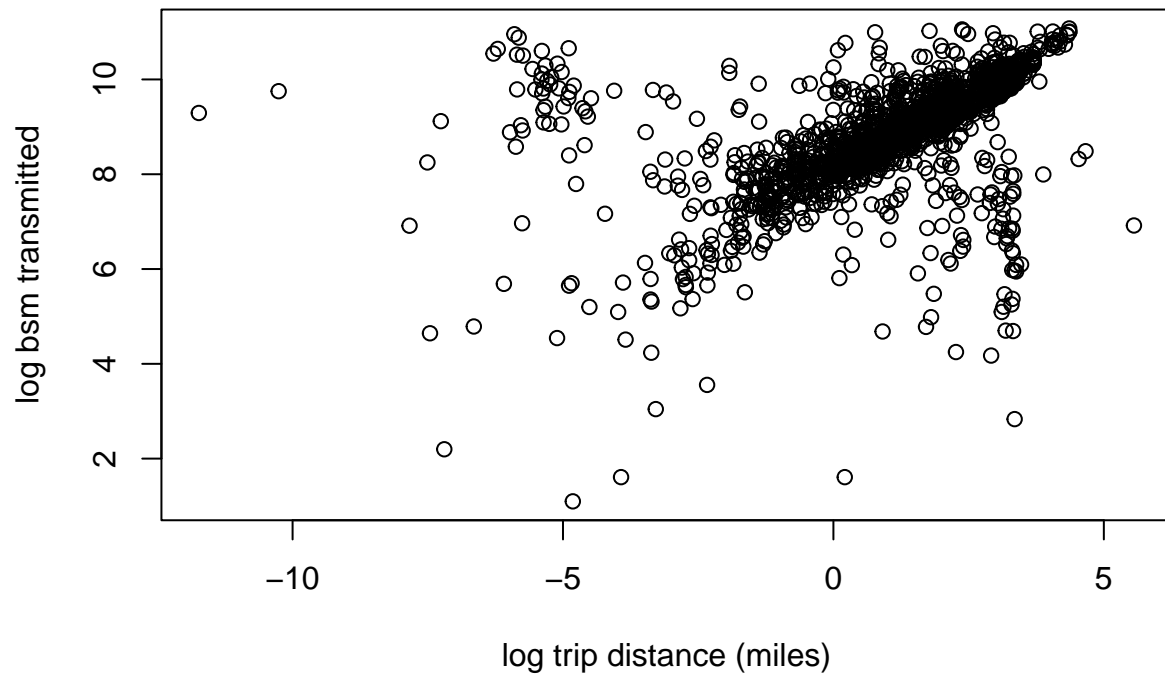
```
#data <- read_csv("Downloads/FinalCleanedDataIO.csv")
data <- read_csv("Desktop/bsmr.csv")
```

```
## Rows: 2008 Columns: 25
## -- Column specification -----
## Delimiter: ","
## chr (6): filedate, uuid, tripid, utctime(datetime), endlocaltime(datetime), ...
## dbl (19): F1, device, endlatitude, endlocaltime, endlongitude, filetimeutc, ...
##
## i Use 'spec()' to retrieve the full column specification for this data.
## i Specify the column types or set 'show_col_types = FALSE' to quiet this message.
```

```
model <- lm(log(numbsmtx) ~ log(tripdistance_miles), data = data)
summary(model)
```

```
##
## Call:
## lm(formula = log(numbsmtx) ~ log(tripdistance_miles), data = data)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -7.0127 -0.3004  0.1167  0.4130  4.3669
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)      8.55720    0.02585  331.04  <2e-16 ***
## log(tripdistance_miles) 0.30930    0.01097   28.19  <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.9821 on 2006 degrees of freedom
## Multiple R-squared:  0.2837, Adjusted R-squared:  0.2834
## F-statistic: 794.6 on 1 and 2006 DF, p-value: < 2.2e-16
```

```
plot(log(data$tripdistance_miles), log(data$numbsmtx), xlab = 'log trip distance (miles)', ylab = 'log bsm transmitted')
```



```
hist(resid(model), main = "Distribution of Residuals")
```

Distribution of Residuals

