# Simple Linear Regression

**Select Type:**

| Simple Linear Regression | ▼ |
|---|---|

**Upload File**

| Browse... | SimpleLinearRegression.csv |
|---|---|

Upload complete

**Dependent Variable**

| Year | ▼ |
|---|---|

**Independent Variable**

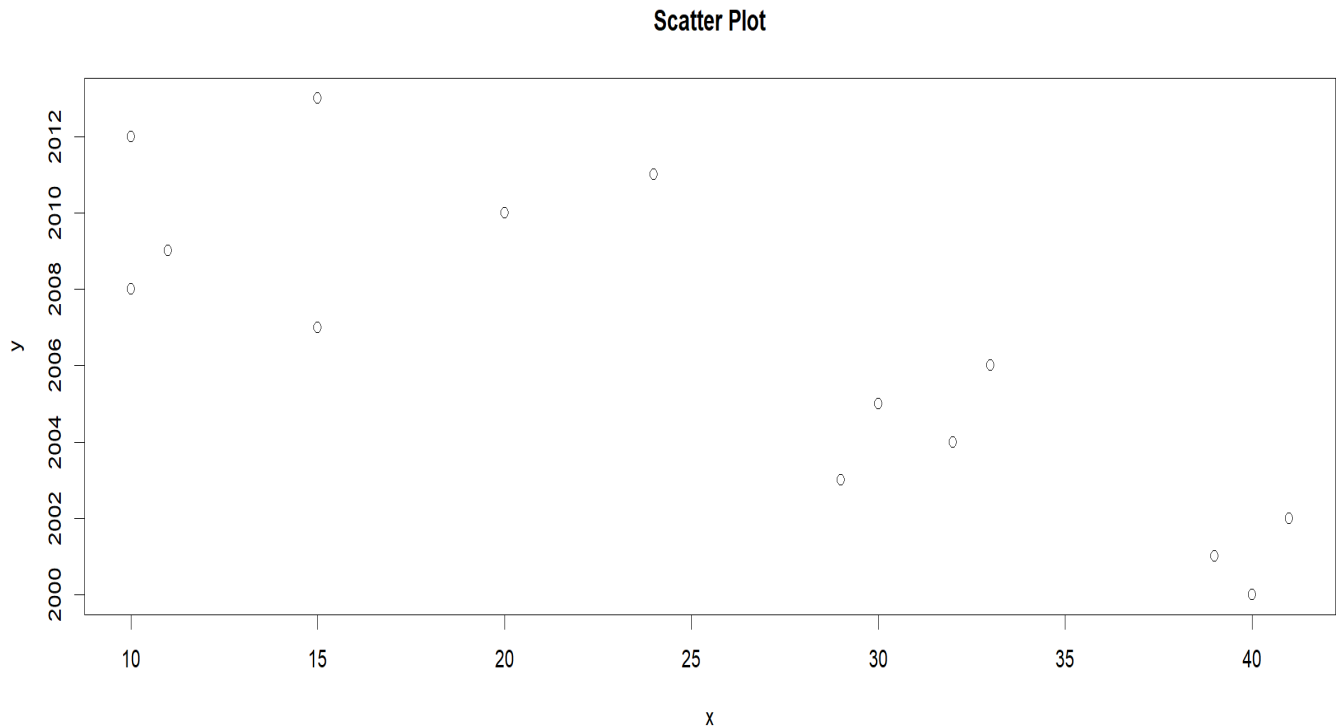| Snowfall | ▼ |
|---|---|

# Data from CSV

```
    x    y
1   40 2000
2   39 2001
3   41 2002
4   29 2003
5   32 2004
6   30 2005
7   33 2006
8   15 2007
9   10 2008
10  11 2009
11  20 2010
12  24 2011
13  10 2012
14  15 2013
```

# Plot between dependent and independent variables

**Scatter Plot**



# Correlation Coefficient and Test

```
[1] -0.8378483
```

```
        Pearson's product-moment correlation

data:  df[, 1] and df[, 2]
t = -5.3167, df = 12, p-value = 0.0001833
alternative hypothesis: true correlation is not equal to 0
95 percent confidence interval:
 -0.9473071 -0.5531841
sample estimates:
      cor
-0.8378483
```

# Linear Model and summarisation

```
Call:
lm(formula = y ~ x)

Coefficients:
(Intercept)            x
  2014.1341      -0.3062
```

```
Call:
lm(formula = y ~ x)

Residuals:
    Min      1Q  Median      3Q     Max
-3.0717 -1.8548 -0.1407  1.7109  4.2156

Coefficients:
             Estimate Std. Error  t value Pr(>|t|)
(Intercept) 2014.1340     1.5701 1282.790  < 2e-16 ***
x             -0.3062     0.0576   -5.317 0.000183 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 2.377 on 12 degrees of freedom
Multiple R-squared:  0.702,    Adjusted R-squared:  0.6772
F-statistic: 28.27 on 1 and 12 DF,  p-value: 0.0001833
```

# Regression Equation

Y=2014.134055 + -0.306237*X