

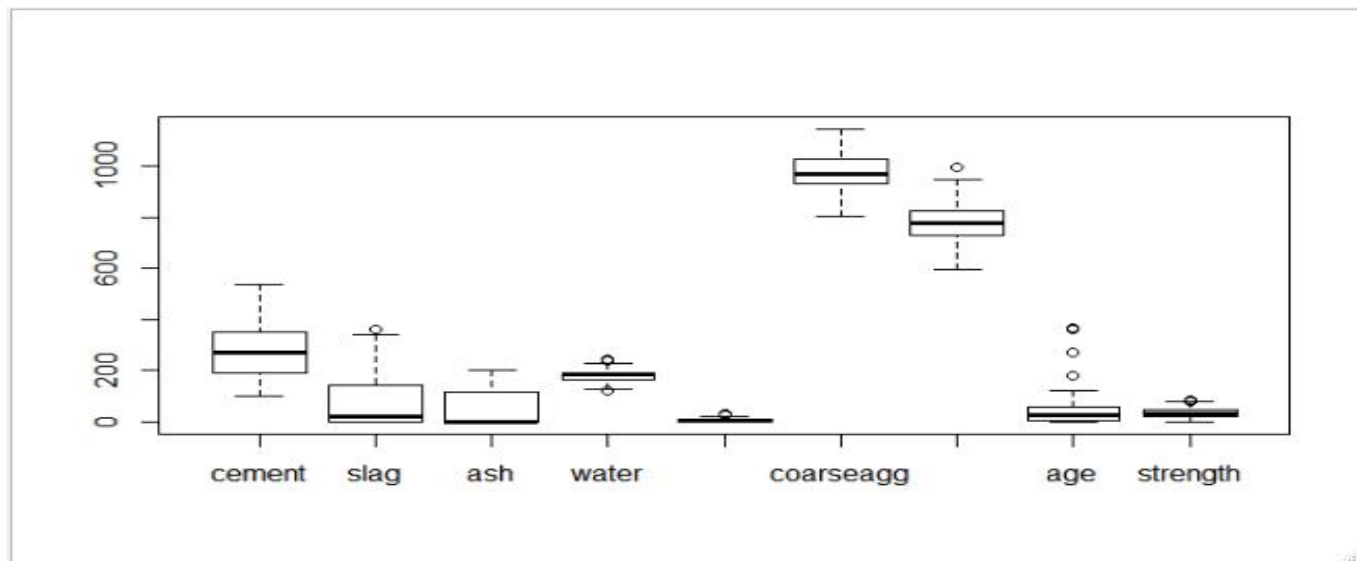
Neural Network

Example-Concrete Dataset

```
data.frame': 1030 obs. of 9 variables:
 $ cement      : num  141 169 250 266 155 ...
 $ slag        : num  212 42.2 0 114 183.4 ...
 $ ash         : num   0 124.3 95.7 0 0 ...
 $ water       : num  204 158 187 228 193 ...
 $ superplastic: num   0 10.8 5.5 0 9.1 0 0 6.4 0 9 ...
 $ coarseagg   : num  972 1081 957 932 1047 ...
 $ fineagg     : num  748 796 861 670 697 ...
 $ age         : int   28 14 28 28 28 90 7 56 28 28 ...
 $ strength    : num  29.9 23.5 29.2 45.9 18.3 ...
```

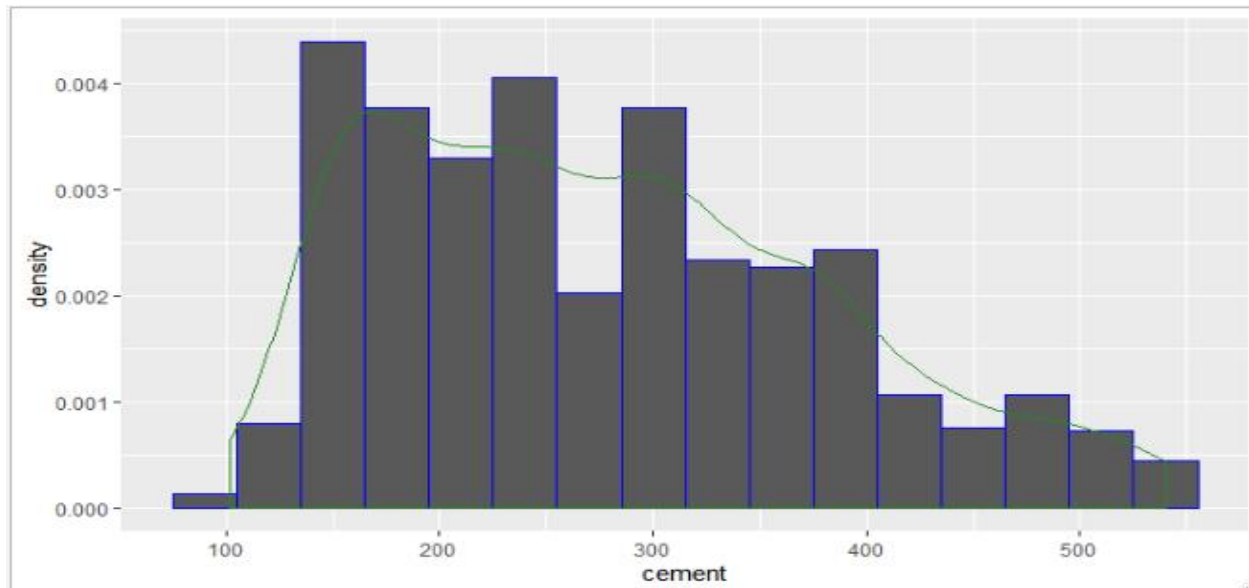
All variables are numeric and out target variable is Strength.

Box Plot →



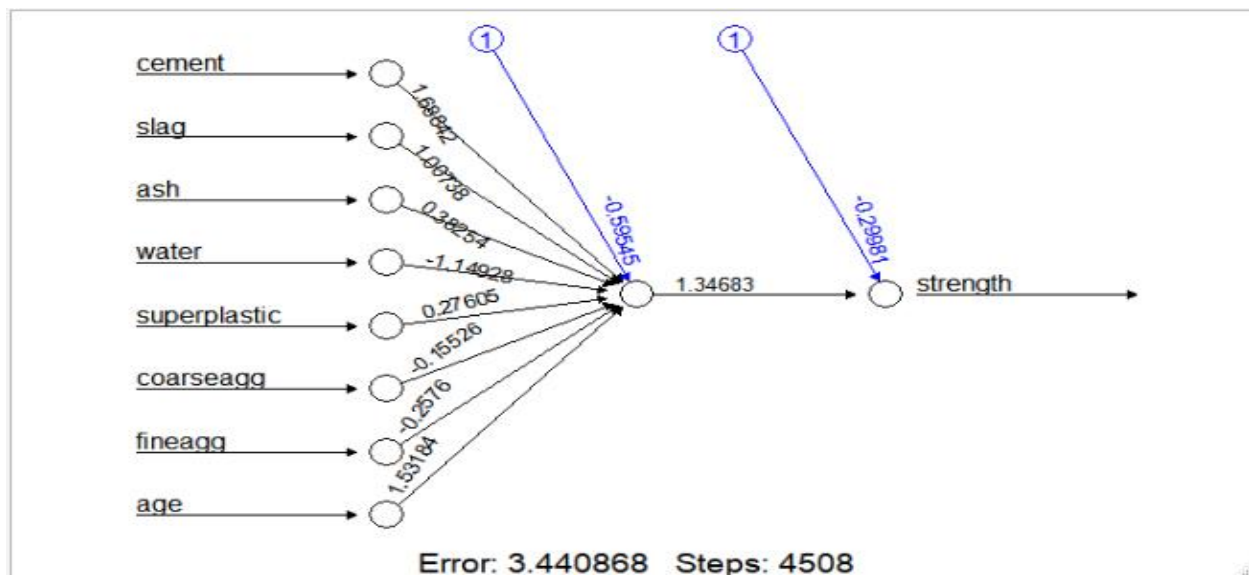
From the above box plot, few variables are containing outliers so we will remove these outliers.

After removing outliers, we are getting another set of outliers.



From above histogram, we can say that it is positively skewed.

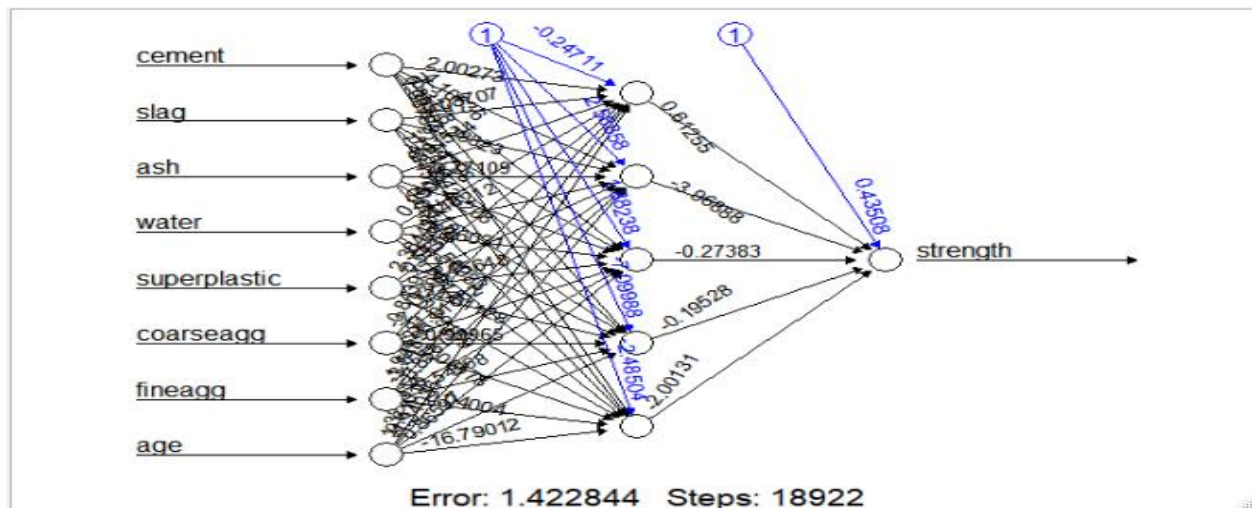
Model-1 → Without hidden layers



Correlation → 0.860514

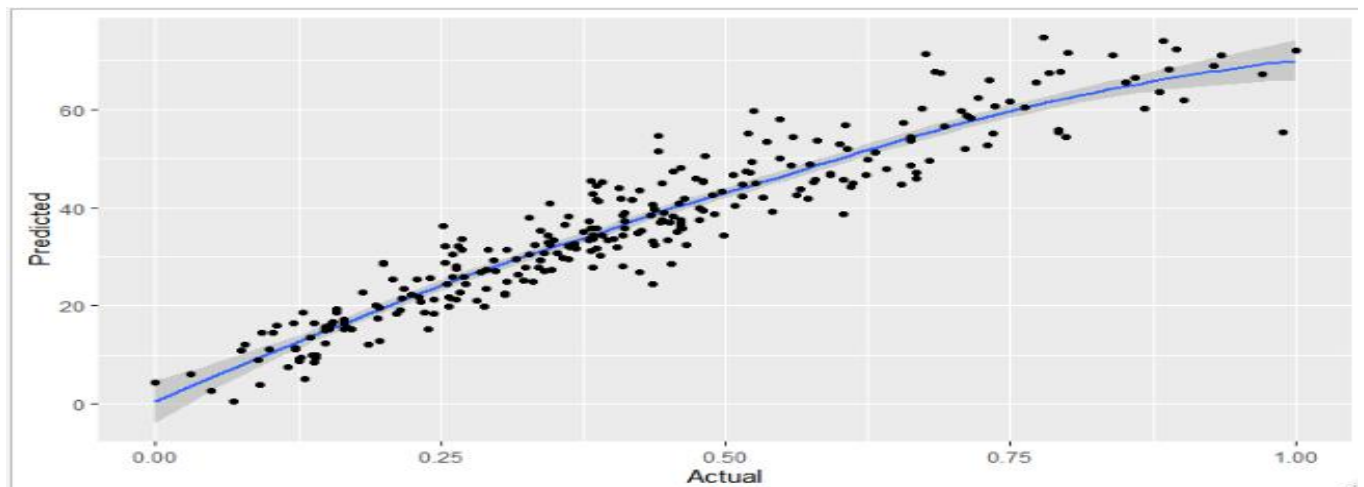
RMSE → 8.7317

Model-2 → With hidden layers = 5



Correlation → 0.943952

RMSE → 5.649183



From above information of accuracy and RMSE we are choosing Model-2 as our final model.