```
install.packages("neuralnet")
library(tidyverse)
library(neuralnet)

sigmoid = function(x) {
  1 / (1 + exp(-x))
}

data_nn <- read_csv(file="data_nn.csv") #read first row as header
nn = neuralnet(y ~ x1+x2+x3+x4, data = data_nn, hidden = c(2,2), learningrate = 0.02,
          algorithm = 'backprop', err.fct = 'sse', act.fct = sigmoid,
          linear.output = TRUE, startweights = c(0.28,  0.48,  0.9,  0.4,  0.07,  0.66,  0.5,
          0.24,
                                                 0.26,  0.17,  0.75,  0.8,  0.59,  0.55,  0.86,
                                                 0.78,  0.03,  0.52,  0.57))

plot(nn)
summary(nn)
nn$weights
nn$startweights
nn$response
nn$data
nn$net.result
nn$result.matrix
nn$model.list
```