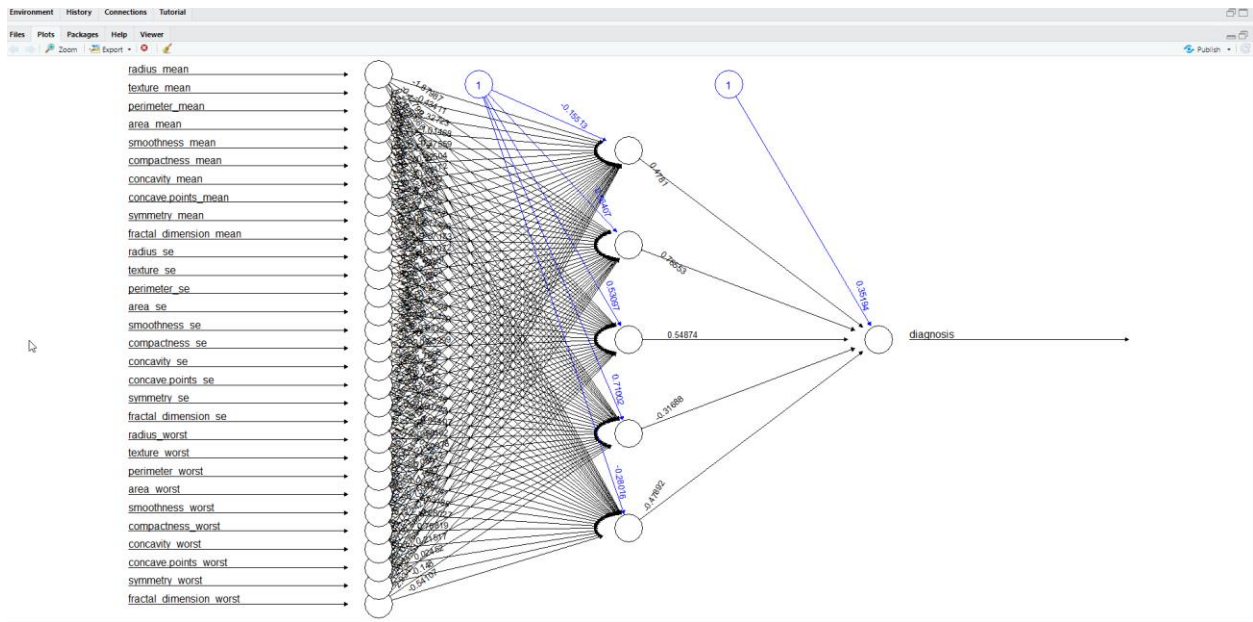


Assignment 8



Assignment 8

```
Console Terminal x Jobs x
~/
> rm(list=ls())
> library(neuralnet)
> dataSet<-read.csv("C:/Users/prabh/Desktop/Stevens/fall_2020/kdd/assignment8/wisc_bc_continuousvar.csv",na.strings = '?')
> view(dataSet)
> table(dataSet$diagnosis)

  B   M
357 212
> #To factor the data set
> dataSet<-data.frame(lapply(na.omit(dataSet),as.numeric))
> # To split the data set into test and testing
> idx<-sort(sample(nrow(dataSet),as.integer(.70*nrow(dataSet))))
> training<-dataSet[idx,]
> test<-dataSet[-idx,]
> ?neuralnet()
> model<- neuralnet(diagnosis~.,training[-1], hidden=5, threshold=0.01)
> #plot the neural network
> plot(model)
> ## test should have only the input column
> ann <-compute(model,test)
> ann$net.result
      [,1]
4    1.369333
6    1.369333
15   1.369333
19   1.369333
20   1.369333
21   1.369333
24   1.369333
26   1.369333
28   1.369333
36   1.369333
40   1.369333
46   1.369333
50   1.369333
56   1.369333
57   1.369333
58   1.369333
59   1.369333
63   1.369333
65   1.369333
67   1.369333
71   1.369333
72   1.369333
75   1.369333
82   1.369333
84   1.369333
85   1.369333
86   1.369333
88   1.369333
92   1.369333
94   1.369333
96   1.369333
99   1.369333
101  1.369333
105  1.369333
107  1.369333
```

Assignment 8

```
Console Terminal x Jobs x
~/
99 1.369333
101 1.369333
105 1.369333
107 1.369333
109 1.369333
115 1.369333
116 1.369333
120 1.369333
124 1.369333
126 1.369333
128 1.369333
132 1.369333
133 1.369333
136 1.369333
137 1.369333
138 1.369333
139 1.369333
140 1.369333
142 1.369333
143 1.369333
146 1.369333
147 1.369333
149 1.369333
156 1.369333
160 1.369333
161 1.369333
167 1.369333
170 1.369333
173 1.369333
174 1.369333
175 1.369333
176 1.369333
177 1.369333
183 1.369333
185 1.369333
191 1.369333
203 1.369333
205 1.369333
209 1.369333
211 1.369333
214 1.369333
218 1.369333
229 1.369333
236 1.369333
237 1.369333
238 1.369333
239 1.369333
240 1.369333
246 1.369333
250 1.369333
251 1.369333
253 1.369333
254 1.369333
255 1.369333
260 1.369333
267 1.369333
274 1.369333
```

Assignment 8

```
Console Terminal x Jobs x
~/
274 1.369333
280 1.369333
284 1.369333
287 1.369333
289 1.369333
290 1.369333
291 1.369333
297 1.369333
298 1.369333
302 1.369333
304 1.369333
307 1.369333
309 1.369333
310 1.369333
311 1.369333
315 1.369333
321 1.369333
326 1.369333
328 1.369333
331 1.369333
332 1.369333
333 1.369333
334 1.369333
335 1.369333
338 1.369333
340 1.369333
342 1.369333
347 1.369333
352 1.369333
355 1.369333
370 1.369333
372 1.369333
376 1.369333
386 1.369333
395 1.369333
402 1.369333
403 1.369333
405 1.369333
407 1.369333
409 1.369333
410 1.369333
411 1.369333
417 1.369333
418 1.369333
419 1.369333
420 1.369333
428 1.369333
429 1.369333
432 1.369333
434 1.369333
444 1.369333
445 1.369333
450 1.369333
451 1.369333
455 1.369333
458 1.369333
459 1.369333
```

Assignment 8

```
Source
Console Terminal x Jobs x
~/
409 1.369333
410 1.369333
411 1.369333
417 1.369333
418 1.369333
419 1.369333
420 1.369333
428 1.369333
429 1.369333
432 1.369333
434 1.369333
444 1.369333
445 1.369333
450 1.369333
451 1.369333
455 1.369333
458 1.369333
459 1.369333
466 1.369333
470 1.369333
473 1.369333
474 1.369333
476 1.369333
481 1.369333
485 1.369333
488 1.369333
490 1.369333
502 1.369333
504 1.369333
506 1.369333
522 1.369333
523 1.369333
530 1.369333
532 1.369333
533 1.369333
534 1.369333
538 1.369333
540 1.369333
541 1.369333
545 1.369333
548 1.369333
556 1.369333
560 1.369333
561 1.369333
567 1.369333
> ann_cat<-ifelse(ann$net.result <1.5,1,2)
> length(ann_cat)
[1] 171
> length(test$diagnosis)
[1] 171
> table(ann_cat,test$diagnosis)

ann_cat    1    2
      1 106   65
> wrong<- (test$diagnosis!=ann_cat)
> errorRate<-sum(wrong)/length(wrong)
>
```