HW9.R

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Homework 9

```r
rm(list=ls())
set.seed(513)
```

Data pre-processing

```r
cancerData=read.csv("/Users/davidfu/Downloads/wisc_bc_ContinuousVar.csv", header=TRUE)


cancerData <- na.omit(cancerData)
cancerData$diagnosis <- as.factor(cancerData$diagnosis)
cancerData$diagnosis <- as.numeric(cancerData$diagnosis)
# create test and training dataset
index <- seq (1,nrow(cancerData),by=5)
test<-cancerData[index,]
training<-cancerData[-index,]
library('e1071')



svm.model <- svm( diagnosis~ ., data =training  )
svm.pred <- predict(svm.model,  test )

table(actual=test[,5],svm.pred )
```

```
##         svm.pred
## actual  0.876924778172117 0.891491268501024 0.904481572128861 0.907035417292919
##   54.42                 0                 0                 0                 0
##   54.53                 0                 0                 0                 0
##   59.96                 0                 0                 0                 0
##   61.24                 0                 0                 0                 0
##   61.49                 0                 0                 0                 0
##   62.5                  0                 0                 0                 0
##   63.19                 0                 0                 0                 0
##   63.76                 0                 0                 0                 0
##   64.12                 0                 0                 0                 0
##   64.55                 0                 0                 0                 0
##   65.67                 0                 0                 0                 0
##   65.75                 0                 0                 0                 0
```

```
##   66.2                0               0               0               0
##   66.52               0               1               0               0
##   66.72               0               0               0               0
##   68.51               0               0               0               0
##   70.39               0               0               0               0
##   71.73               0               0               0               0
##   72.49               0               0               0               0
##   72.76               0               0               0               0
##   73.16               0               0               0               0
##   73.34               0               0               0               0
##   73.7                0               0               0               0
##   73.81               0               0               0               0
##   74.2                0               0               0               0
##   74.23               0               0               0               0
##   74.33               0               0               0               0
##   74.65               1               0               0               0
##   74.72               0               0               0               0
##   75.89               0               0               0               0
##   76.1                0               0               0               0
##   76.2                0               0               0               0
##   76.31               0               0               0               1
##   76.39               0               0               0               0
##   76.53               0               0               0               0
##   76.83               0               0               0               0
##   77.61               0               0               0               0
##   78.11               0               0               0               0
##   78.18               0               0               0               0
##   78.27               0               0               0               0
##   78.29               0               0               0               0
##   78.54               0               0               0               0
##   78.85               0               0               1               0
##   79.08               0               0               0               0
##   79.19               0               0               0               0
##   79.42               0               0               0               0
##   79.83               0               0               0               0
##   81.25               0               0               0               0
##   81.72               0               0               0               0
##   81.92               0               0               0               0
##   82.53               0               0               0               0
##   82.57               0               0               0               0
##   82.85               0               0               0               0
##   82.89               0               0               0               0
##   83.51               0               0               0               0
##   85.63               0               0               0               0
##   86.18               0               0               0               0
##   86.34               0               0               0               0
##   86.87               0               0               0               0
##   87.19               0               0               0               0
##   87.21               0               0               0               0
##   87.38               0               0               0               0
##   87.88               0               0               0               0
##   88.05               0               0               0               0
##   88.06               0               0               0               0
##   88.44               0               0               0               0
```

```
##   89.75                  0                  0                  0                  0
##   89.79                  0                  0                  0                  0
##   90.3                   0                  0                  0                  0
##   90.96                  0                  0                  0                  0
##   91.12                  0                  0                  0                  0
##   91.38                  0                  0                  0                  0
##   91.43                  0                  0                  0                  0
##   92.51                  0                  0                  0                  0
##   93.97                  0                  0                  0                  0
##   94.15                  0                  0                  0                  0
##   94.37                  0                  0                  0                  0
##   94.57                  0                  0                  0                  0
##   95.5                   0                  0                  0                  0
##   96.03                  0                  0                  0                  0
##   96.12                  0                  0                  0                  0
##   96.73                  0                  0                  0                  0
##   97.4                   0                  0                  0                  0
##   98.73                  0                  0                  0                  0
##   98.78                  0                  0                  0                  0
##   102.1                  0                  0                  0                  0
##   102.7                  0                  0                  0                  0
##   104.1                  0                  0                  0                  0
##   105.8                  0                  0                  0                  0
##   106.3                  0                  0                  0                  0
##   109                    0                  0                  0                  0
##   110.1                  0                  0                  0                  0
##   111.2                  0                  0                  0                  0
##   111.8                  0                  0                  0                  0
##   113.4                  0                  0                  0                  0
##   116                    0                  0                  0                  0
##   121.1                  0                  0                  0                  0
##   122.8                  0                  0                  0                  0
##   123.6                  0                  0                  0                  0
##   123.7                  0                  0                  0                  0
##   124.4                  0                  0                  0                  0
##   124.8                  0                  0                  0                  0
##   126.2                  0                  0                  0                  0
##   129.5                  0                  0                  0                  0
##   131.2                  0                  0                  0                  0
##   132.4                  0                  0                  0                  0
##   132.9                  0                  0                  0                  0
##   133.8                  0                  0                  0                  0
##   134.7                  0                  0                  0                  0
##   135.7                  0                  0                  0                  0
##   137.8                  0                  0                  0                  0
##   138.9                  0                  0                  0                  0
##   182.1                  0                  0                  0                  0
##         svm.pred
## actual  0.930449868583569 0.936328269506322 0.937926100856576 0.93856299818969
##   54.42                  0                  0                  0                  0
##   54.53                  0                  0                  0                  0
##   59.96                  0                  0                  0                  0
##   61.24                  0                  0                  0                  0
##   61.49                  0                  0                  0                  0
```

3

```
##   62.5                   0                   0                   0                   0
##   63.19                  0                   0                   0                   0
##   63.76                  0                   0                   0                   0
##   64.12                  0                   0                   0                   0
##   64.55                  0                   0                   0                   0
##   65.67                  0                   0                   0                   0
##   65.75                  0                   0                   0                   0
##   66.2                   0                   0                   0                   0
##   66.52                  0                   0                   0                   0
##   66.72                  0                   0                   0                   0
##   68.51                  0                   0                   0                   0
##   70.39                  0                   0                   0                   0
##   71.73                  0                   0                   0                   0
##   72.49                  0                   0                   0                   0
##   72.76                  0                   0                   0                   0
##   73.16                  0                   0                   0                   0
##   73.34                  0                   0                   0                   0
##   73.7                   0                   0                   0                   0
##   73.81                  0                   0                   0                   0
##   74.2                   0                   0                   0                   0
##   74.23                  0                   0                   0                   0
##   74.33                  0                   0                   0                   0
##   74.65                  0                   0                   0                   0
##   74.72                  0                   0                   0                   0
##   75.89                  0                   0                   0                   0
##   76.1                   0                   0                   0                   0
##   76.2                   0                   0                   0                   0
##   76.31                  0                   0                   0                   0
##   76.39                  0                   0                   0                   0
##   76.53                  0                   0                   0                   0
##   76.83                  0                   0                   0                   0
##   77.61                  0                   0                   0                   0
##   78.11                  0                   0                   0                   1
##   78.18                  0                   0                   0                   0
##   78.27                  0                   0                   0                   0
##   78.29                  0                   0                   0                   0
##   78.54                  0                   0                   0                   0
##   78.85                  0                   0                   0                   0
##   79.08                  0                   1                   0                   0
##   79.19                  0                   0                   0                   0
##   79.42                  0                   0                   0                   0
##   79.83                  0                   0                   0                   0
##   81.25                  0                   0                   1                   0
##   81.72                  0                   0                   0                   0
##   81.92                  0                   0                   0                   0
##   82.53                  0                   0                   0                   0
##   82.57                  0                   0                   0                   0
##   82.85                  0                   0                   0                   0
##   82.89                  0                   0                   0                   0
##   83.51                  0                   0                   0                   0
##   85.63                  0                   0                   0                   0
##   86.18                  0                   0                   0                   0
##   86.34                  0                   0                   0                   0
##   86.87                  0                   0                   0                   0
```

```
## 87.19               0               0               0               0
## 87.21               0               0               0               0
## 87.38               0               0               0               0
## 87.88               0               0               0               0
## 88.05               0               0               0               0
## 88.06               1               0               0               0
## 88.44               0               0               0               0
## 89.75               0               0               0               0
## 89.79               0               0               0               0
## 90.3                0               0               0               0
## 90.96               0               0               0               0
## 91.12               0               0               0               0
## 91.38               0               0               0               0
## 91.43               0               0               0               0
## 92.51               0               0               0               0
## 93.97               0               0               0               0
## 94.15               0               0               0               0
## 94.37               0               0               0               0
## 94.57               0               0               0               0
## 95.5                0               0               0               0
## 96.03               0               0               0               0
## 96.12               0               0               0               0
## 96.73               0               0               0               0
## 97.4                0               0               0               0
## 98.73               0               0               0               0
## 98.78               0               0               0               0
## 102.1               0               0               0               0
## 102.7               0               0               0               0
## 104.1               0               0               0               0
## 105.8               0               0               0               0
## 106.3               0               0               0               0
## 109                 0               0               0               0
## 110.1               0               0               0               0
## 111.2               0               0               0               0
## 111.8               0               0               0               0
## 113.4               0               0               0               0
## 116                 0               0               0               0
## 121.1               0               0               0               0
## 122.8               0               0               0               0
## 123.6               0               0               0               0
## 123.7               0               0               0               0
## 124.4               0               0               0               0
## 124.8               0               0               0               0
## 126.2               0               0               0               0
## 129.5               0               0               0               0
## 131.2               0               0               0               0
## 132.4               0               0               0               0
## 132.9               0               0               0               0
## 133.8               0               0               0               0
## 134.7               0               0               0               0
## 135.7               0               0               0               0
## 137.8               0               0               0               0
## 138.9               0               0               0               0
## 182.1               0               0               0               0
```

```
##         svm.pred
## actual  0.944839675341973 0.947996641230718 0.948760447348278 0.950163764280572
##   54.42                 0                 0                 0                 0
##   54.53                 0                 0                 0                 0
##   59.96                 0                 0                 0                 0
##   61.24                 0                 0                 0                 0
##   61.49                 0                 0                 0                 0
##   62.5                  0                 0                 0                 0
##   63.19                 0                 0                 0                 0
##   63.76                 0                 0                 0                 0
##   64.12                 0                 0                 0                 0
##   64.55                 0                 0                 0                 0
##   65.67                 0                 0                 0                 0
##   65.75                 0                 0                 0                 0
##   66.2                  0                 0                 0                 0
##   66.52                 0                 0                 0                 0
##   66.72                 0                 0                 0                 0
##   68.51                 0                 0                 0                 0
##   70.39                 0                 0                 0                 0
##   71.73                 0                 0                 0                 0
##   72.49                 0                 0                 0                 0
##   72.76                 0                 0                 0                 0
##   73.16                 0                 0                 0                 0
##   73.34                 0                 0                 0                 0
##   73.7                  0                 0                 0                 0
##   73.81                 0                 0                 0                 0
##   74.2                  0                 0                 0                 0
##   74.23                 0                 0                 0                 0
##   74.33                 0                 0                 0                 0
##   74.65                 0                 0                 0                 0
##   74.72                 0                 0                 0                 0
##   75.89                 0                 0                 0                 0
##   76.1                  0                 0                 0                 0
##   76.2                  0                 0                 0                 0
##   76.31                 0                 0                 0                 0
##   76.39                 0                 0                 0                 0
##   76.53                 0                 0                 0                 0
##   76.83                 0                 1                 0                 0
##   77.61                 0                 0                 0                 0
##   78.11                 0                 0                 0                 0
##   78.18                 0                 0                 0                 0
##   78.27                 0                 0                 0                 0
##   78.29                 0                 0                 0                 0
##   78.54                 0                 0                 0                 0
##   78.85                 0                 0                 0                 0
##   79.08                 0                 0                 0                 0
##   79.19                 0                 0                 0                 0
##   79.42                 0                 0                 0                 0
##   79.83                 0                 0                 0                 0
##   81.25                 0                 0                 0                 0
##   81.72                 0                 0                 0                 0
##   81.92                 0                 0                 0                 0
##   82.53                 0                 0                 1                 0
##   82.57                 0                 0                 0                 0
```

```
##   82.85          0          0          0          0
##   82.89          1          0          0          0
##   83.51          0          0          0          0
##   85.63          0          0          0          0
##   86.18          0          0          0          0
##   86.34          0          0          0          0
##   86.87          0          0          0          0
##   87.19          0          0          0          0
##   87.21          0          0          0          0
##   87.38          0          0          0          0
##   87.88          0          0          0          0
##   88.05          0          0          0          0
##   88.06          0          0          0          0
##   88.44          0          0          0          0
##   89.75          0          0          0          1
##   89.79          0          0          0          0
##   90.3           0          0          0          0
##   90.96          0          0          0          0
##   91.12          0          0          0          0
##   91.38          0          0          0          0
##   91.43          0          0          0          0
##   92.51          0          0          0          0
##   93.97          0          0          0          0
##   94.15          0          0          0          0
##   94.37          0          0          0          0
##   94.57          0          0          0          0
##   95.5           0          0          0          0
##   96.03          0          0          0          0
##   96.12          0          0          0          0
##   96.73          0          0          0          0
##   97.4           0          0          0          0
##   98.73          0          0          0          0
##   98.78          0          0          0          0
##  102.1           0          0          0          0
##  102.7           0          0          0          0
##  104.1           0          0          0          0
##  105.8           0          0          0          0
##  106.3           0          0          0          0
##  109             0          0          0          0
##  110.1           0          0          0          0
##  111.2           0          0          0          0
##  111.8           0          0          0          0
##  113.4           0          0          0          0
##  116             0          0          0          0
##  121.1           0          0          0          0
##  122.8           0          0          0          0
##  123.6           0          0          0          0
##  123.7           0          0          0          0
##  124.4           0          0          0          0
##  124.8           0          0          0          0
##  126.2           0          0          0          0
##  129.5           0          0          0          0
##  131.2           0          0          0          0
##  132.4           0          0          0          0
```

```
##    132.9                   0                   0                  0                  0
##    133.8                   0                   0                  0                  0
##    134.7                   0                   0                  0                  0
##    135.7                   0                   0                  0                  0
##    137.8                   0                   0                  0                  0
##    138.9                   0                   0                  0                  0
##    182.1                   0                   0                  0                  0
##        svm.pred
## actual  0.950615651515403 0.958128863892067 0.959972512122011 0.962108790198968
##    54.42                   0                   0                  0                  0
##    54.53                   0                   0                  0                  0
##    59.96                   0                   0                  0                  0
##    61.24                   0                   0                  0                  0
##    61.49                   0                   0                  0                  0
##    62.5                    1                   0                  0                  0
##    63.19                   0                   0                  0                  0
##    63.76                   0                   0                  0                  0
##    64.12                   0                   0                  0                  0
##    64.55                   0                   0                  0                  0
##    65.67                   0                   0                  0                  0
##    65.75                   0                   0                  0                  0
##    66.2                    0                   0                  0                  1
##    66.52                   0                   0                  0                  0
##    66.72                   0                   0                  0                  0
##    68.51                   0                   0                  0                  0
##    70.39                   0                   0                  0                  0
##    71.73                   0                   0                  0                  0
##    72.49                   0                   0                  0                  0
##    72.76                   0                   0                  0                  0
##    73.16                   0                   0                  0                  0
##    73.34                   0                   0                  0                  0
##    73.7                    0                   0                  0                  0
##    73.81                   0                   0                  0                  0
##    74.2                    0                   0                  0                  0
##    74.23                   0                   1                  0                  0
##    74.33                   0                   0                  0                  0
##    74.65                   0                   0                  0                  0
##    74.72                   0                   0                  0                  0
##    75.89                   0                   0                  0                  0
##    76.1                    0                   0                  0                  0
##    76.2                    0                   0                  0                  0
##    76.31                   0                   0                  0                  0
##    76.39                   0                   0                  0                  0
##    76.53                   0                   0                  0                  0
##    76.83                   0                   0                  0                  0
##    77.61                   0                   0                  0                  0
##    78.11                   0                   0                  0                  0
##    78.18                   0                   0                  0                  0
##    78.27                   0                   0                  0                  0
##    78.29                   0                   0                  0                  0
##    78.54                   0                   0                  0                  0
##    78.85                   0                   0                  0                  0
##    79.08                   0                   0                  0                  0
##    79.19                   0                   0                  0                  0
```

```
##    79.42              0              0              0              0
##    79.83              0              0              0              0
##    81.25              0              0              0              0
##    81.72              0              0              0              0
##    81.92              0              0              0              0
##    82.53              0              0              0              0
##    82.57              0              0              0              0
##    82.85              0              0              0              0
##    82.89              0              0              0              0
##    83.51              0              0              0              0
##    85.63              0              0              0              0
##    86.18              0              0              0              0
##    86.34              0              0              0              0
##    86.87              0              0              0              0
##    87.19              0              0              0              0
##    87.21              0              0              0              0
##    87.38              0              0              0              0
##    87.88              0              0              1              0
##    88.05              0              0              0              0
##    88.06              0              0              0              0
##    88.44              0              0              0              0
##    89.75              0              0              0              0
##    89.79              0              0              0              0
##    90.3               0              0              0              0
##    90.96              0              0              0              0
##    91.12              0              0              0              0
##    91.38              0              0              0              0
##    91.43              0              0              0              0
##    92.51              0              0              0              0
##    93.97              0              0              0              0
##    94.15              0              0              0              0
##    94.37              0              0              0              0
##    94.57              0              0              0              0
##    95.5               0              0              0              0
##    96.03              0              0              0              0
##    96.12              0              0              0              0
##    96.73              0              0              0              0
##    97.4               0              0              0              0
##    98.73              0              0              0              0
##    98.78              0              0              0              0
##    102.1              0              0              0              0
##    102.7              0              0              0              0
##    104.1              0              0              0              0
##    105.8              0              0              0              0
##    106.3              0              0              0              0
##    109                0              0              0              0
##    110.1              0              0              0              0
##    111.2              0              0              0              0
##    111.8              0              0              0              0
##    113.4              0              0              0              0
##    116                0              0              0              0
##    121.1              0              0              0              0
##    122.8              0              0              0              0
##    123.6              0              0              0              0
```

```
##   123.7                   0                   0                  0                 0
##   124.4                   0                   0                  0                 0
##   124.8                   0                   0                  0                 0
##   126.2                   0                   0                  0                 0
##   129.5                   0                   0                  0                 0
##   131.2                   0                   0                  0                 0
##   132.4                   0                   0                  0                 0
##   132.9                   0                   0                  0                 0
##   133.8                   0                   0                  0                 0
##   134.7                   0                   0                  0                 0
##   135.7                   0                   0                  0                 0
##   137.8                   0                   0                  0                 0
##   138.9                   0                   0                  0                 0
##   182.1                   0                   0                  0                 0
##        svm.pred
## actual  0.962470664373223 0.962485667876503 0.963003317011395 0.963328796341232
##   54.42                   0                   0                  0                 0
##   54.53                   0                   0                  0                 0
##   59.96                   0                   0                  0                 0
##   61.24                   0                   0                  0                 0
##   61.49                   0                   0                  0                 0
##   62.5                    0                   0                  0                 0
##   63.19                   0                   0                  0                 0
##   63.76                   0                   0                  0                 0
##   64.12                   0                   0                  0                 0
##   64.55                   0                   0                  0                 0
##   65.67                   0                   0                  0                 0
##   65.75                   0                   0                  0                 0
##   66.2                    0                   0                  0                 0
##   66.52                   0                   0                  0                 0
##   66.72                   0                   0                  0                 0
##   68.51                   0                   0                  0                 0
##   70.39                   0                   0                  0                 0
##   71.73                   0                   0                  0                 0
##   72.49                   0                   0                  0                 0
##   72.76                   0                   0                  0                 0
##   73.16                   0                   0                  0                 0
##   73.34                   0                   0                  0                 0
##   73.7                    0                   0                  0                 0
##   73.81                   0                   0                  0                 0
##   74.2                    0                   0                  1                 0
##   74.23                   0                   0                  0                 0
##   74.33                   1                   0                  0                 0
##   74.65                   0                   0                  0                 0
##   74.72                   0                   0                  0                 0
##   75.89                   0                   0                  0                 0
##   76.1                    0                   0                  0                 0
##   76.2                    0                   0                  0                 0
##   76.31                   0                   0                  0                 0
##   76.39                   0                   0                  0                 0
##   76.53                   0                   0                  0                 0
##   76.83                   0                   0                  0                 0
##   77.61                   0                   0                  0                 0
##   78.11                   0                   0                  0                 0
```

```
##   78.18              0              0              0              0
##   78.27              0              0              0              0
##   78.29              0              1              0              0
##   78.54              0              0              0              0
##   78.85              0              0              0              0
##   79.08              0              0              0              0
##   79.19              0              0              0              0
##   79.42              0              0              0              0
##   79.83              0              0              0              0
##   81.25              0              0              0              0
##   81.72              0              0              0              0
##   81.92              0              0              0              0
##   82.53              0              0              0              0
##   82.57              0              0              0              0
##   82.85              0              0              0              0
##   82.89              0              0              0              0
##   83.51              0              0              0              0
##   85.63              0              0              0              0
##   86.18              0              0              0              0
##   86.34              0              0              0              0
##   86.87              0              0              0              0
##   87.19              0              0              0              0
##   87.21              0              0              0              0
##   87.38              0              0              0              1
##   87.88              0              0              0              0
##   88.05              0              0              0              0
##   88.06              0              0              0              0
##   88.44              0              0              0              0
##   89.75              0              0              0              0
##   89.79              0              0              0              0
##   90.3               0              0              0              0
##   90.96              0              0              0              0
##   91.12              0              0              0              0
##   91.38              0              0              0              0
##   91.43              0              0              0              0
##   92.51              0              0              0              0
##   93.97              0              0              0              0
##   94.15              0              0              0              0
##   94.37              0              0              0              0
##   94.57              0              0              0              0
##   95.5               0              0              0              0
##   96.03              0              0              0              0
##   96.12              0              0              0              0
##   96.73              0              0              0              0
##   97.4               0              0              0              0
##   98.73              0              0              0              0
##   98.78              0              0              0              0
##   102.1              0              0              0              0
##   102.7              0              0              0              0
##   104.1              0              0              0              0
##   105.8              0              0              0              0
##   106.3              0              0              0              0
##   109                0              0              0              0
##   110.1              0              0              0              0
```

```
## 111.2                 0               0                 0                0
## 111.8                 0               0                 0                0
## 113.4                 0               0                 0                0
## 116                   0               0                 0                0
## 121.1                 0               0                 0                0
## 122.8                 0               0                 0                0
## 123.6                 0               0                 0                0
## 123.7                 0               0                 0                0
## 124.4                 0               0                 0                0
## 124.8                 0               0                 0                0
## 126.2                 0               0                 0                0
## 129.5                 0               0                 0                0
## 131.2                 0               0                 0                0
## 132.4                 0               0                 0                0
## 132.9                 0               0                 0                0
## 133.8                 0               0                 0                0
## 134.7                 0               0                 0                0
## 135.7                 0               0                 0                0
## 137.8                 0               0                 0                0
## 138.9                 0               0                 0                0
## 182.1                 0               0                 0                0
##        svm.pred
## actual  0.964457246371728 0.970537832404234 0.971950053890713 0.97900322232581
## 54.42                 0               0                 0                0
## 54.53                 0               0                 0                0
## 59.96                 0               0                 0                0
## 61.24                 0               0                 0                0
## 61.49                 0               0                 0                0
## 62.5                  0               0                 0                0
## 63.19                 0               0                 0                0
## 63.76                 0               0                 0                0
## 64.12                 0               0                 0                0
## 64.55                 0               0                 0                0
## 65.67                 0               0                 0                0
## 65.75                 0               0                 0                0
## 66.2                  0               0                 0                0
## 66.52                 0               0                 0                0
## 66.72                 0               0                 0                0
## 68.51                 0               0                 0                0
## 70.39                 0               0                 0                0
## 71.73                 0               0                 0                0
## 72.49                 0               0                 0                0
## 72.76                 0               0                 0                0
## 73.16                 0               0                 0                0
## 73.34                 0               0                 0                0
## 73.7                  0               0                 0                0
## 73.81                 0               0                 0                0
## 74.2                  0               0                 0                0
## 74.23                 0               0                 0                0
## 74.33                 0               0                 0                0
## 74.65                 0               0                 0                0
## 74.72                 0               0                 1                0
## 75.89                 0               0                 0                0
## 76.1                  0               0                 0                0
```

```
##   76.2              0              0              0              0
##   76.31             0              0              0              0
##   76.39             0              0              0              0
##   76.53             0              0              0              0
##   76.83             0              0              0              0
##   77.61             0              0              0              0
##   78.11             0              0              0              0
##   78.18             0              0              0              0
##   78.27             0              1              0              0
##   78.29             0              0              0              0
##   78.54             0              0              0              0
##   78.85             0              0              0              0
##   79.08             0              0              0              0
##   79.19             0              0              0              0
##   79.42             0              0              0              0
##   79.83             1              0              0              0
##   81.25             0              0              0              0
##   81.72             0              0              0              0
##   81.92             0              0              0              0
##   82.53             0              0              0              0
##   82.57             0              0              0              0
##   82.85             0              0              0              0
##   82.89             0              0              0              0
##   83.51             0              0              0              0
##   85.63             0              0              0              1
##   86.18             0              0              0              0
##   86.34             0              0              0              0
##   86.87             0              0              0              0
##   87.19             0              0              0              0
##   87.21             0              0              0              0
##   87.38             0              0              0              0
##   87.88             0              0              0              0
##   88.05             0              0              0              0
##   88.06             0              0              0              0
##   88.44             0              0              0              0
##   89.75             0              0              0              0
##   89.79             0              0              0              0
##   90.3              0              0              0              0
##   90.96             0              0              0              0
##   91.12             0              0              0              0
##   91.38             0              0              0              0
##   91.43             0              0              0              0
##   92.51             0              0              0              0
##   93.97             0              0              0              0
##   94.15             0              0              0              0
##   94.37             0              0              0              0
##   94.57             0              0              0              0
##   95.5              0              0              0              0
##   96.03             0              0              0              0
##   96.12             0              0              0              0
##   96.73             0              0              0              0
##   97.4              0              0              0              0
##   98.73             0              0              0              0
##   98.78             0              0              0              0
```

```
##   102.1                 0                 0                0                0
##   102.7                 0                 0                0                0
##   104.1                 0                 0                0                0
##   105.8                 0                 0                0                0
##   106.3                 0                 0                0                0
##   109                   0                 0                0                0
##   110.1                 0                 0                0                0
##   111.2                 0                 0                0                0
##   111.8                 0                 0                0                0
##   113.4                 0                 0                0                0
##   116                   0                 0                0                0
##   121.1                 0                 0                0                0
##   122.8                 0                 0                0                0
##   123.6                 0                 0                0                0
##   123.7                 0                 0                0                0
##   124.4                 0                 0                0                0
##   124.8                 0                 0                0                0
##   126.2                 0                 0                0                0
##   129.5                 0                 0                0                0
##   131.2                 0                 0                0                0
##   132.4                 0                 0                0                0
##   132.9                 0                 0                0                0
##   133.8                 0                 0                0                0
##   134.7                 0                 0                0                0
##   135.7                 0                 0                0                0
##   137.8                 0                 0                0                0
##   138.9                 0                 0                0                0
##   182.1                 0                 0                0                0
##         svm.pred
## actual  0.982111784339124 0.982533980240237 0.986204074294001 0.989767365133794
##   54.42                 0                 0                0                0
##   54.53                 0                 0                0                0
##   59.96                 0                 0                0                0
##   61.24                 0                 0                0                0
##   61.49                 0                 0                0                0
##   62.5                  0                 0                0                0
##   63.19                 0                 0                0                0
##   63.76                 0                 0                0                0
##   64.12                 0                 0                0                0
##   64.55                 0                 0                0                0
##   65.67                 0                 0                0                0
##   65.75                 1                 0                0                0
##   66.2                  0                 0                0                0
##   66.52                 0                 0                0                0
##   66.72                 0                 0                0                0
##   68.51                 0                 0                0                0
##   70.39                 0                 0                1                0
##   71.73                 0                 0                0                0
##   72.49                 0                 0                0                0
##   72.76                 0                 1                0                0
##   73.16                 0                 0                0                0
##   73.34                 0                 0                0                1
##   73.7                  0                 0                0                0
##   73.81                 0                 0                0                0
```

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```
##   74.2          0          0          0          0
##   74.23         0          0          0          0
##   74.33         0          0          0          0
##   74.65         0          0          0          0
##   74.72         0          0          0          0
##   75.89         0          0          0          0
##   76.1          0          0          0          0
##   76.2          0          0          0          0
##   76.31         0          0          0          0
##   76.39         0          0          0          0
##   76.53         0          0          0          0
##   76.83         0          0          0          0
##   77.61         0          0          0          0
##   78.11         0          0          0          0
##   78.18         0          0          0          0
##   78.27         0          0          0          0
##   78.29         0          0          0          0
##   78.54         0          0          0          0
##   78.85         0          0          0          0
##   79.08         0          0          0          0
##   79.19         0          0          0          0
##   79.42         0          0          0          0
##   79.83         0          0          0          0
##   81.25         0          0          0          0
##   81.72         0          0          0          0
##   81.92         0          0          0          0
##   82.53         0          0          0          0
##   82.57         0          0          0          0
##   82.85         0          0          0          0
##   82.89         0          0          0          0
##   83.51         0          0          0          0
##   85.63         0          0          0          0
##   86.18         0          0          0          0
##   86.34         0          0          0          0
##   86.87         0          0          0          0
##   87.19         0          0          0          0
##   87.21         0          0          0          0
##   87.38         0          0          0          0
##   87.88         0          0          0          0
##   88.05         0          0          0          0
##   88.06         0          0          0          0
##   88.44         0          0          0          0
##   89.75         0          0          0          0
##   89.79         0          0          0          0
##   90.3          0          0          0          0
##   90.96         0          0          0          0
##   91.12         0          0          0          0
##   91.38         0          0          0          0
##   91.43         0          0          0          0
##   92.51         0          0          0          0
##   93.97         0          0          0          0
##   94.15         0          0          0          0
##   94.37         0          0          0          0
##   94.57         0          0          0          0
```

```
##    95.5              0              0              0              0
##    96.03             0              0              0              0
##    96.12             0              0              0              0
##    96.73             0              0              0              0
##    97.4              0              0              0              0
##    98.73             0              0              0              0
##    98.78             0              0              0              0
##    102.1             0              0              0              0
##    102.7             0              0              0              0
##    104.1             0              0              0              0
##    105.8             0              0              0              0
##    106.3             0              0              0              0
##    109               0              0              0              0
##    110.1             0              0              0              0
##    111.2             0              0              0              0
##    111.8             0              0              0              0
##    113.4             0              0              0              0
##    116               0              0              0              0
##    121.1             0              0              0              0
##    122.8             0              0              0              0
##    123.6             0              0              0              0
##    123.7             0              0              0              0
##    124.4             0              0              0              0
##    124.8             0              0              0              0
##    126.2             0              0              0              0
##    129.5             0              0              0              0
##    131.2             0              0              0              0
##    132.4             0              0              0              0
##    132.9             0              0              0              0
##    133.8             0              0              0              0
##    134.7             0              0              0              0
##    135.7             0              0              0              0
##    137.8             0              0              0              0
##    138.9             0              0              0              0
##    182.1             0              0              0              0
##         svm.pred
## actual  0.992617675318283 0.996282862155995 0.99729406596809 0.998184012079989
##    54.42             0              0              0              0
##    54.53             0              0              0              0
##    59.96             0              0              0              0
##    61.24             0              0              0              0
##    61.49             1              0              0              0
##    62.5              0              0              0              0
##    63.19             0              0              0              0
##    63.76             0              0              0              0
##    64.12             0              0              0              0
##    64.55             0              0              0              0
##    65.67             0              0              0              0
##    65.75             0              0              0              0
##    66.2              0              0              0              0
##    66.52             0              0              0              0
##    66.72             0              0              0              0
##    68.51             0              1              0              0
##    70.39             0              0              0              0
```

```
##   71.73              0              0              0              0
##   72.49              0              0              0              0
##   72.76              0              0              0              0
##   73.16              0              0              0              0
##   73.34              0              0              0              0
##   73.7               0              0              1              0
##   73.81              0              0              0              0
##   74.2               0              0              0              0
##   74.23              0              0              0              0
##   74.33              0              0              0              0
##   74.65              0              0              0              0
##   74.72              0              0              0              0
##   75.89              0              0              0              0
##   76.1               0              0              0              0
##   76.2               0              0              0              0
##   76.31              0              0              0              0
##   76.39              0              0              0              0
##   76.53              0              0              0              0
##   76.83              0              0              0              0
##   77.61              0              0              0              0
##   78.11              0              0              0              0
##   78.18              0              0              0              0
##   78.27              0              0              0              0
##   78.29              0              0              0              0
##   78.54              0              0              0              0
##   78.85              0              0              0              0
##   79.08              0              0              0              0
##   79.19              0              0              0              0
##   79.42              0              0              0              0
##   79.83              0              0              0              0
##   81.25              0              0              0              0
##   81.72              0              0              0              0
##   81.92              0              0              0              0
##   82.53              0              0              0              0
##   82.57              0              0              0              0
##   82.85              0              0              0              0
##   82.89              0              0              0              0
##   83.51              0              0              0              0
##   85.63              0              0              0              0
##   86.18              0              0              0              0
##   86.34              0              0              0              0
##   86.87              0              0              0              0
##   87.19              0              0              0              0
##   87.21              0              0              0              0
##   87.38              0              0              0              0
##   87.88              0              0              0              0
##   88.05              0              0              0              0
##   88.06              0              0              0              0
##   88.44              0              0              0              1
##   89.75              0              0              0              0
##   89.79              0              0              0              0
##   90.3               0              0              0              0
##   90.96              0              0              0              0
##   91.12              0              0              0              0
```

```
##    91.38                 0                 0                 0                 0
##    91.43                 0                 0                 0                 0
##    92.51                 0                 0                 0                 0
##    93.97                 0                 0                 0                 0
##    94.15                 0                 0                 0                 0
##    94.37                 0                 0                 0                 0
##    94.57                 0                 0                 0                 0
##    95.5                  0                 0                 0                 0
##    96.03                 0                 0                 0                 0
##    96.12                 0                 0                 0                 0
##    96.73                 0                 0                 0                 0
##    97.4                  0                 0                 0                 0
##    98.73                 0                 0                 0                 0
##    98.78                 0                 0                 0                 0
##    102.1                 0                 0                 0                 0
##    102.7                 0                 0                 0                 0
##    104.1                 0                 0                 0                 0
##    105.8                 0                 0                 0                 0
##    106.3                 0                 0                 0                 0
##    109                   0                 0                 0                 0
##    110.1                 0                 0                 0                 0
##    111.2                 0                 0                 0                 0
##    111.8                 0                 0                 0                 0
##    113.4                 0                 0                 0                 0
##    116                   0                 0                 0                 0
##    121.1                 0                 0                 0                 0
##    122.8                 0                 0                 0                 0
##    123.6                 0                 0                 0                 0
##    123.7                 0                 0                 0                 0
##    124.4                 0                 0                 0                 0
##    124.8                 0                 0                 0                 0
##    126.2                 0                 0                 0                 0
##    129.5                 0                 0                 0                 0
##    131.2                 0                 0                 0                 0
##    132.4                 0                 0                 0                 0
##    132.9                 0                 0                 0                 0
##    133.8                 0                 0                 0                 0
##    134.7                 0                 0                 0                 0
##    135.7                 0                 0                 0                 0
##    137.8                 0                 0                 0                 0
##    138.9                 0                 0                 0                 0
##    182.1                 0                 0                 0                 0
##         svm.pred
## actual  1.00121534414621 1.00413321978015 1.00476732490182 1.00596714206307
##    54.42                 0                0                0                0
##    54.53                 0                0                0                0
##    59.96                 0                0                0                0
##    61.24                 0                0                0                0
##    61.49                 0                0                0                0
##    62.5                  0                0                0                0
##    63.19                 0                0                1                0
##    63.76                 0                0                0                0
##    64.12                 0                0                0                0
##    64.55                 0                0                0                0
```

```
## 65.67            0            1            0            0
## 65.75            0            0            0            0
## 66.2             0            0            0            0
## 66.52            0            0            0            0
## 66.72            0            0            0            0
## 68.51            0            0            0            0
## 70.39            0            0            0            0
## 71.73            0            0            0            0
## 72.49            0            0            0            0
## 72.76            0            0            0            0
## 73.16            0            0            0            0
## 73.34            0            0            0            1
## 73.7             0            0            0            0
## 73.81            0            0            0            0
## 74.2             0            0            0            0
## 74.23            0            0            0            0
## 74.33            0            0            0            0
## 74.65            0            0            0            0
## 74.72            0            0            0            0
## 75.89            0            0            0            0
## 76.1             0            0            0            0
## 76.2             0            0            0            0
## 76.31            0            0            0            0
## 76.39            1            0            0            0
## 76.53            0            0            0            0
## 76.83            0            0            0            0
## 77.61            0            0            0            0
## 78.11            0            0            0            0
## 78.18            0            0            0            0
## 78.27            0            0            0            0
## 78.29            0            0            0            0
## 78.54            0            0            0            0
## 78.85            0            0            0            0
## 79.08            0            0            0            0
## 79.19            0            0            0            0
## 79.42            0            0            0            0
## 79.83            0            0            0            0
## 81.25            0            0            0            0
## 81.72            0            0            0            0
## 81.92            0            0            0            0
## 82.53            0            0            0            0
## 82.57            0            0            0            0
## 82.85            0            0            0            0
## 82.89            0            0            0            0
## 83.51            0            0            0            0
## 85.63            0            0            0            0
## 86.18            0            0            0            0
## 86.34            0            0            0            0
## 86.87            0            0            0            0
## 87.19            0            0            0            0
## 87.21            0            0            0            0
## 87.38            0            0            0            0
## 87.88            0            0            0            0
## 88.05            0            0            0            0
```

```
##   88.06            0            0            0            0
##   88.44            0            0            0            0
##   89.75            0            0            0            0
##   89.79            0            0            0            0
##   90.3             0            0            0            0
##   90.96            0            0            0            0
##   91.12            0            0            0            0
##   91.38            0            0            0            0
##   91.43            0            0            0            0
##   92.51            0            0            0            0
##   93.97            0            0            0            0
##   94.15            0            0            0            0
##   94.37            0            0            0            0
##   94.57            0            0            0            0
##   95.5             0            0            0            0
##   96.03            0            0            0            0
##   96.12            0            0            0            0
##   96.73            0            0            0            0
##   97.4             0            0            0            0
##   98.73            0            0            0            0
##   98.78            0            0            0            0
##   102.1            0            0            0            0
##   102.7            0            0            0            0
##   104.1            0            0            0            0
##   105.8            0            0            0            0
##   106.3            0            0            0            0
##   109              0            0            0            0
##   110.1            0            0            0            0
##   111.2            0            0            0            0
##   111.8            0            0            0            0
##   113.4            0            0            0            0
##   116              0            0            0            0
##   121.1            0            0            0            0
##   122.8            0            0            0            0
##   123.6            0            0            0            0
##   123.7            0            0            0            0
##   124.4            0            0            0            0
##   124.8            0            0            0            0
##   126.2            0            0            0            0
##   129.5            0            0            0            0
##   131.2            0            0            0            0
##   132.4            0            0            0            0
##   132.9            0            0            0            0
##   133.8            0            0            0            0
##   134.7            0            0            0            0
##   135.7            0            0            0            0
##   137.8            0            0            0            0
##   138.9            0            0            0            0
##   182.1            0            0            0            0
##        svm.pred
## actual  1.0112012605607 1.02561765527867 1.03689900420462 1.03987683716318
##   54.42               0                0                0                0
##   54.53               0                0                0                0
##   59.96               0                0                0                0
```

```
## 61.24              0              0              0              0
## 61.49              0              0              0              0
## 62.5               0              0              0              0
## 63.19              0              0              0              0
## 63.76              0              0              1              0
## 64.12              0              0              0              0
## 64.55              0              0              0              0
## 65.67              0              0              0              0
## 65.75              0              0              0              0
## 66.2               0              0              0              0
## 66.52              0              0              0              0
## 66.72              0              0              0              0
## 68.51              0              0              0              0
## 70.39              0              0              0              0
## 71.73              0              0              0              0
## 72.49              0              0              0              0
## 72.76              0              0              0              0
## 73.16              0              0              0              0
## 73.34              0              0              0              0
## 73.7               0              0              0              0
## 73.81              0              0              0              0
## 74.2               0              0              0              0
## 74.23              0              0              0              0
## 74.33              0              0              0              0
## 74.65              0              0              0              0
## 74.72              0              0              0              0
## 75.89              0              0              0              0
## 76.1               0              0              0              0
## 76.2               0              0              0              0
## 76.31              0              0              0              0
## 76.39              0              0              0              0
## 76.53              0              0              0              0
## 76.83              0              0              0              0
## 77.61              0              0              0              0
## 78.11              0              0              0              0
## 78.18              0              1              0              0
## 78.27              0              0              0              0
## 78.29              0              0              0              0
## 78.54              0              0              0              0
## 78.85              0              0              0              0
## 79.08              0              0              0              0
## 79.19              0              0              0              0
## 79.42              0              0              0              0
## 79.83              0              0              0              0
## 81.25              0              0              0              0
## 81.72              0              0              0              0
## 81.92              0              0              0              0
## 82.53              0              0              0              0
## 82.57              0              0              0              0
## 82.85              0              0              0              0
## 82.89              0              0              0              0
## 83.51              0              0              0              0
## 85.63              0              0              0              0
## 86.18              0              0              0              0
```

```
##   86.34                    0                    0                    0                    0
##   86.87                    0                    0                    0                    0
##   87.19                    0                    0                    0                    0
##   87.21                    0                    0                    0                    0
##   87.38                    0                    0                    0                    0
##   87.88                    0                    0                    0                    0
##   88.05                    0                    0                    0                    0
##   88.06                    0                    0                    0                    0
##   88.44                    0                    0                    0                    0
##   89.75                    0                    0                    0                    0
##   89.79                    0                    0                    0                    1
##   90.3                     1                    0                    0                    0
##   90.96                    0                    0                    0                    0
##   91.12                    0                    0                    0                    0
##   91.38                    0                    0                    0                    0
##   91.43                    0                    0                    0                    0
##   92.51                    0                    0                    0                    0
##   93.97                    0                    0                    0                    0
##   94.15                    0                    0                    0                    0
##   94.37                    0                    0                    0                    0
##   94.57                    0                    0                    0                    0
##   95.5                     0                    0                    0                    0
##   96.03                    0                    0                    0                    0
##   96.12                    0                    0                    0                    0
##   96.73                    0                    0                    0                    0
##   97.4                     0                    0                    0                    0
##   98.73                    0                    0                    0                    0
##   98.78                    0                    0                    0                    0
##   102.1                    0                    0                    0                    0
##   102.7                    0                    0                    0                    0
##   104.1                    0                    0                    0                    0
##   105.8                    0                    0                    0                    0
##   106.3                    0                    0                    0                    0
##   109                      0                    0                    0                    0
##   110.1                    0                    0                    0                    0
##   111.2                    0                    0                    0                    0
##   111.8                    0                    0                    0                    0
##   113.4                    0                    0                    0                    0
##   116                      0                    0                    0                    0
##   121.1                    0                    0                    0                    0
##   122.8                    0                    0                    0                    0
##   123.6                    0                    0                    0                    0
##   123.7                    0                    0                    0                    0
##   124.4                    0                    0                    0                    0
##   124.8                    0                    0                    0                    0
##   126.2                    0                    0                    0                    0
##   129.5                    0                    0                    0                    0
##   131.2                    0                    0                    0                    0
##   132.4                    0                    0                    0                    0
##   132.9                    0                    0                    0                    0
##   133.8                    0                    0                    0                    0
##   134.7                    0                    0                    0                    0
##   135.7                    0                    0                    0                    0
##   137.8                    0                    0                    0                    0
```

```
## 138.9                 0              0                  0                      0
## 182.1                 0              0                  0                      0
##        svm.pred
## actual  1.04083781963495 1.0454850684949 1.0467180122771 1.0550242693206
## 54.42                 0              0                  0                      0
## 54.53                 0              0                  0                      0
## 59.96                 0              0                  0                      0
## 61.24                 0              0                  0                      0
## 61.49                 0              0                  0                      0
## 62.5                  0              0                  0                      0
## 63.19                 0              0                  0                      0
## 63.76                 0              0                  0                      0
## 64.12                 0              0                  0                      0
## 64.55                 0              0                  0                      0
## 65.67                 0              0                  0                      0
## 65.75                 0              0                  0                      0
## 66.2                  0              0                  0                      0
## 66.52                 0              0                  0                      0
## 66.72                 0              1                  0                      0
## 68.51                 0              0                  0                      0
## 70.39                 0              0                  0                      0
## 71.73                 0              0                  1                      0
## 72.49                 0              0                  0                      0
## 72.76                 0              0                  0                      0
## 73.16                 0              0                  0                      0
## 73.34                 0              0                  0                      0
## 73.7                  0              0                  0                      0
## 73.81                 0              0                  0                      0
## 74.2                  0              0                  0                      0
## 74.23                 0              0                  0                      0
## 74.33                 0              0                  0                      0
## 74.65                 0              0                  0                      0
## 74.72                 0              0                  0                      0
## 75.89                 0              0                  0                      0
## 76.1                  0              0                  0                      0
## 76.2                  0              0                  0                      0
## 76.31                 0              0                  0                      0
## 76.39                 0              0                  0                      0
## 76.53                 0              0                  0                      0
## 76.83                 0              0                  0                      0
## 77.61                 0              0                  0                      0
## 78.11                 0              0                  0                      0
## 78.18                 0              0                  0                      0
## 78.27                 0              0                  0                      0
## 78.29                 0              0                  0                      0
## 78.54                 0              0                  0                      0
## 78.85                 0              0                  0                      0
## 79.08                 0              0                  0                      0
## 79.19                 1              0                  0                      0
## 79.42                 0              0                  0                      0
## 79.83                 0              0                  0                      0
## 81.25                 0              0                  0                      0
## 81.72                 0              0                  0                      0
## 81.92                 0              0                  0                      0
```

```
## 82.53                 0              0              0              0
## 82.57                 0              0              0              0
## 82.85                 0              0              0              0
## 82.89                 0              0              0              0
## 83.51                 0              0              0              0
## 85.63                 0              0              0              0
## 86.18                 0              0              0              0
## 86.34                 0              0              0              0
## 86.87                 0              0              0              0
## 87.19                 0              0              0              0
## 87.21                 0              0              0              0
## 87.38                 0              0              0              0
## 87.88                 0              0              0              0
## 88.05                 0              0              0              0
## 88.06                 0              0              0              0
## 88.44                 0              0              0              0
## 89.75                 0              0              0              0
## 89.79                 0              0              0              0
## 90.3                  0              0              0              0
## 90.96                 0              0              0              0
## 91.12                 0              0              0              0
## 91.38                 0              0              0              0
## 91.43                 0              0              0              0
## 92.51                 0              0              0              0
## 93.97                 0              0              0              0
## 94.15                 0              0              0              0
## 94.37                 0              0              0              0
## 94.57                 0              0              0              0
## 95.5                  0              0              0              1
## 96.03                 0              0              0              0
## 96.12                 0              0              0              0
## 96.73                 0              0              0              0
## 97.4                  0              0              0              0
## 98.73                 0              0              0              0
## 98.78                 0              0              0              0
## 102.1                 0              0              0              0
## 102.7                 0              0              0              0
## 104.1                 0              0              0              0
## 105.8                 0              0              0              0
## 106.3                 0              0              0              0
## 109                   0              0              0              0
## 110.1                 0              0              0              0
## 111.2                 0              0              0              0
## 111.8                 0              0              0              0
## 113.4                 0              0              0              0
## 116                   0              0              0              0
## 121.1                 0              0              0              0
## 122.8                 0              0              0              0
## 123.6                 0              0              0              0
## 123.7                 0              0              0              0
## 124.4                 0              0              0              0
## 124.8                 0              0              0              0
## 126.2                 0              0              0              0
## 129.5                 0              0              0              0
```

```
##    131.2            0            0            0            0
##    132.4            0            0            0            0
##    132.9            0            0            0            0
##    133.8            0            0            0            0
##    134.7            0            0            0            0
##    135.7            0            0            0            0
##    137.8            0            0            0            0
##    138.9            0            0            0            0
##    182.1            0            0            0            0
##          svm.pred
## actual   1.05539895072667 1.05614335687098 1.05929775004211 1.06744277052134
##    54.42            0                0                0                0
##    54.53            0                0                0                0
##    59.96            0                0                1                0
##    61.24            0                0                0                0
##    61.49            0                0                0                0
##    62.5             0                0                0                0
##    63.19            0                0                0                0
##    63.76            0                0                0                0
##    64.12            0                0                0                0
##    64.55            0                0                0                0
##    65.67            0                0                0                0
##    65.75            0                0                0                0
##    66.2             0                0                0                0
##    66.52            0                0                0                0
##    66.72            0                0                0                0
##    68.51            0                0                0                0
##    70.39            0                0                0                0
##    71.73            0                0                0                0
##    72.49            0                0                0                0
##    72.76            0                0                0                0
##    73.16            0                0                0                0
##    73.34            0                0                0                0
##    73.7             0                0                0                0
##    73.81            0                0                0                0
##    74.2             0                0                0                0
##    74.23            0                0                0                0
##    74.33            0                0                0                0
##    74.65            0                0                0                0
##    74.72            0                0                0                0
##    75.89            0                0                0                0
##    76.1             0                0                0                0
##    76.2             0                0                0                0
##    76.31            0                0                0                0
##    76.39            0                0                0                0
##    76.53            0                1                0                0
##    76.83            0                0                0                0
##    77.61            0                0                0                0
##    78.11            0                0                0                0
##    78.18            0                0                0                0
##    78.27            0                0                0                0
##    78.29            0                0                0                0
##    78.54            0                0                0                0
##    78.85            0                0                0                0
```

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```
##   79.08                0                0                0                0
##   79.19                0                0                0                0
##   79.42                0                0                0                0
##   79.83                0                0                0                0
##   81.25                0                0                0                0
##   81.72                0                0                0                0
##   81.92                0                0                0                1
##   82.53                0                0                0                0
##   82.57                0                0                0                0
##   82.85                1                0                0                0
##   82.89                0                0                0                0
##   83.51                0                0                0                0
##   85.63                0                0                0                0
##   86.18                0                0                0                0
##   86.34                0                0                0                0
##   86.87                0                0                0                0
##   87.19                0                0                0                0
##   87.21                0                0                0                0
##   87.38                0                0                0                0
##   87.88                0                0                0                0
##   88.05                0                0                0                0
##   88.06                0                0                0                0
##   88.44                0                0                0                0
##   89.75                0                0                0                0
##   89.79                0                0                0                0
##   90.3                 0                0                0                0
##   90.96                0                0                0                0
##   91.12                0                0                0                0
##   91.38                0                0                0                0
##   91.43                0                0                0                0
##   92.51                0                0                0                0
##   93.97                0                0                0                0
##   94.15                0                0                0                0
##   94.37                0                0                0                0
##   94.57                0                0                0                0
##   95.5                 0                0                0                0
##   96.03                0                0                0                0
##   96.12                0                0                0                0
##   96.73                0                0                0                0
##   97.4                 0                0                0                0
##   98.73                0                0                0                0
##   98.78                0                0                0                0
##   102.1                0                0                0                0
##   102.7                0                0                0                0
##   104.1                0                0                0                0
##   105.8                0                0                0                0
##   106.3                0                0                0                0
##   109                  0                0                0                0
##   110.1                0                0                0                0
##   111.2                0                0                0                0
##   111.8                0                0                0                0
##   113.4                0                0                0                0
##   116                  0                0                0                0
##   121.1                0                0                0                0
```

```
##   122.8               0               0               0               0
##   123.6               0               0               0               0
##   123.7               0               0               0               0
##   124.4               0               0               0               0
##   124.8               0               0               0               0
##   126.2               0               0               0               0
##   129.5               0               0               0               0
##   131.2               0               0               0               0
##   132.4               0               0               0               0
##   132.9               0               0               0               0
##   133.8               0               0               0               0
##   134.7               0               0               0               0
##   135.7               0               0               0               0
##   137.8               0               0               0               0
##   138.9               0               0               0               0
##   182.1               0               0               0               0
##        svm.pred
## actual  1.07267928202877 1.07454589391302 1.0754266102824 1.09727104842524
##   54.42               0               0               0               0
##   54.53               1               0               0               0
##   59.96               0               0               0               0
##   61.24               0               0               0               0
##   61.49               0               0               0               0
##   62.5                0               0               0               0
##   63.19               0               0               0               0
##   63.76               0               0               0               0
##   64.12               0               0               0               0
##   64.55               0               0               0               0
##   65.67               0               0               0               0
##   65.75               0               0               0               0
##   66.2                0               0               0               0
##   66.52               0               0               0               0
##   66.72               0               0               0               0
##   68.51               0               0               0               0
##   70.39               0               0               0               0
##   71.73               0               0               0               0
##   72.49               0               0               0               0
##   72.76               0               0               0               0
##   73.16               0               0               0               0
##   73.34               0               0               0               0
##   73.7                0               0               0               0
##   73.81               0               0               1               0
##   74.2                0               0               0               0
##   74.23               0               0               0               0
##   74.33               0               0               0               0
##   74.65               0               0               0               0
##   74.72               0               0               0               0
##   75.89               0               1               0               0
##   76.1                0               0               0               0
##   76.2                0               0               0               0
##   76.31               0               0               0               0
##   76.39               0               0               0               0
##   76.53               0               0               0               0
##   76.83               0               0               0               0
```

```
##   77.61                0              0              0              0
##   78.11                0              0              0              0
##   78.18                0              0              0              0
##   78.27                0              0              0              0
##   78.29                0              0              0              0
##   78.54                0              0              0              0
##   78.85                0              0              0              0
##   79.08                0              0              0              0
##   79.19                0              0              0              0
##   79.42                0              0              0              0
##   79.83                0              0              0              0
##   81.25                0              0              0              0
##   81.72                0              0              0              0
##   81.92                0              0              0              0
##   82.53                0              0              0              0
##   82.57                0              0              0              0
##   82.85                0              0              0              0
##   82.89                0              0              0              0
##   83.51                0              0              0              0
##   85.63                0              0              0              0
##   86.18                0              0              0              0
##   86.34                0              0              0              0
##   86.87                0              0              0              0
##   87.19                0              0              0              1
##   87.21                0              0              0              0
##   87.38                0              0              0              0
##   87.88                0              0              0              0
##   88.05                0              0              0              0
##   88.06                0              0              0              0
##   88.44                0              0              0              0
##   89.75                0              0              0              0
##   89.79                0              0              0              0
##   90.3                 0              0              0              0
##   90.96                0              0              0              0
##   91.12                0              0              0              0
##   91.38                0              0              0              0
##   91.43                0              0              0              0
##   92.51                0              0              0              0
##   93.97                0              0              0              0
##   94.15                0              0              0              0
##   94.37                0              0              0              0
##   94.57                0              0              0              0
##   95.5                 0              0              0              0
##   96.03                0              0              0              0
##   96.12                0              0              0              0
##   96.73                0              0              0              0
##   97.4                 0              0              0              0
##   98.73                0              0              0              0
##   98.78                0              0              0              0
##   102.1                0              0              0              0
##   102.7                0              0              0              0
##   104.1                0              0              0              0
##   105.8                0              0              0              0
##   106.3                0              0              0              0
```

```
##   109                 0               0               0               0
##   110.1               0               0               0               0
##   111.2               0               0               0               0
##   111.8               0               0               0               0
##   113.4               0               0               0               0
##   116                 0               0               0               0
##   121.1               0               0               0               0
##   122.8               0               0               0               0
##   123.6               0               0               0               0
##   123.7               0               0               0               0
##   124.4               0               0               0               0
##   124.8               0               0               0               0
##   126.2               0               0               0               0
##   129.5               0               0               0               0
##   131.2               0               0               0               0
##   132.4               0               0               0               0
##   132.9               0               0               0               0
##   133.8               0               0               0               0
##   134.7               0               0               0               0
##   135.7               0               0               0               0
##   137.8               0               0               0               0
##   138.9               0               0               0               0
##   182.1               0               0               0               0
##        svm.pred
## actual  1.10192260675617 1.10987716536216 1.1173556599889 1.12521483933072
##   54.42               0               0               1               0
##   54.53               0               0               0               0
##   59.96               0               0               0               0
##   61.24               0               0               0               0
##   61.49               0               0               0               0
##   62.5                0               0               0               0
##   63.19               0               0               0               0
##   63.76               0               0               0               0
##   64.12               0               0               0               0
##   64.55               0               0               0               0
##   65.67               0               0               0               0
##   65.75               0               0               0               0
##   66.2                0               0               0               0
##   66.52               0               0               0               0
##   66.72               0               0               0               0
##   68.51               0               0               0               0
##   70.39               0               0               0               0
##   71.73               0               0               0               0
##   72.49               0               0               0               0
##   72.76               0               0               0               0
##   73.16               0               1               0               0
##   73.34               0               0               0               0
##   73.7                0               0               0               0
##   73.81               0               0               0               0
##   74.2                0               0               0               0
##   74.23               0               0               0               0
##   74.33               0               0               0               0
##   74.65               0               0               0               0
##   74.72               0               0               0               0
```

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```
##   75.89                0            0            0            0
##   76.1                 0            0            0            0
##   76.2                 0            0            0            0
##   76.31                0            0            0            0
##   76.39                0            0            0            0
##   76.53                0            0            0            0
##   76.83                0            0            0            0
##   77.61                1            0            0            0
##   78.11                0            0            0            0
##   78.18                0            0            0            0
##   78.27                0            0            0            0
##   78.29                0            0            0            0
##   78.54                0            0            0            0
##   78.85                0            0            0            0
##   79.08                0            0            0            0
##   79.19                0            0            0            0
##   79.42                0            0            0            0
##   79.83                0            0            0            0
##   81.25                0            0            0            0
##   81.72                0            0            0            0
##   81.92                0            0            0            0
##   82.53                0            0            0            0
##   82.57                0            0            0            0
##   82.85                0            0            0            0
##   82.89                0            0            0            0
##   83.51                0            0            0            0
##   85.63                0            0            0            0
##   86.18                0            0            0            0
##   86.34                0            0            0            0
##   86.87                0            0            0            1
##   87.19                0            0            0            0
##   87.21                0            0            0            0
##   87.38                0            0            0            0
##   87.88                0            0            0            0
##   88.05                0            0            0            0
##   88.06                0            0            0            0
##   88.44                0            0            0            0
##   89.75                0            0            0            0
##   89.79                0            0            0            0
##   90.3                 0            0            0            0
##   90.96                0            0            0            0
##   91.12                0            0            0            0
##   91.38                0            0            0            0
##   91.43                0            0            0            0
##   92.51                0            0            0            0
##   93.97                0            0            0            0
##   94.15                0            0            0            0
##   94.37                0            0            0            0
##   94.57                0            0            0            0
##   95.5                 0            0            0            0
##   96.03                0            0            0            0
##   96.12                0            0            0            0
##   96.73                0            0            0            0
##   97.4                 0            0            0            0
```

```
##    98.73          0          0          0          0
##    98.78          0          0          0          0
##    102.1          0          0          0          0
##    102.7          0          0          0          0
##    104.1          0          0          0          0
##    105.8          0          0          0          0
##    106.3          0          0          0          0
##    109            0          0          0          0
##    110.1          0          0          0          0
##    111.2          0          0          0          0
##    111.8          0          0          0          0
##    113.4          0          0          0          0
##    116            0          0          0          0
##    121.1          0          0          0          0
##    122.8          0          0          0          0
##    123.6          0          0          0          0
##    123.7          0          0          0          0
##    124.4          0          0          0          0
##    124.8          0          0          0          0
##    126.2          0          0          0          0
##    129.5          0          0          0          0
##    131.2          0          0          0          0
##    132.4          0          0          0          0
##    132.9          0          0          0          0
##    133.8          0          0          0          0
##    134.7          0          0          0          0
##    135.7          0          0          0          0
##    137.8          0          0          0          0
##    138.9          0          0          0          0
##    182.1          0          0          0          0
##        svm.pred
## actual  1.12667274743548 1.13268470821282 1.14011720455029 1.14788667669919
##    54.42          0          0          0          0
##    54.53          0          0          0          0
##    59.96          0          0          0          0
##    61.24          0          1          0          0
##    61.49          0          0          0          0
##    62.5           0          0          0          0
##    63.19          0          0          0          0
##    63.76          0          0          0          0
##    64.12          0          0          0          0
##    64.55          0          0          0          1
##    65.67          0          0          0          0
##    65.75          0          0          0          0
##    66.2           0          0          0          0
##    66.52          0          0          0          0
##    66.72          0          0          0          0
##    68.51          0          0          0          0
##    70.39          0          0          0          0
##    71.73          0          0          0          0
##    72.49          0          0          0          0
##    72.76          0          0          0          0
##    73.16          0          0          0          0
##    73.34          0          0          0          0
```

```
## 73.7               0          0          0          0
## 73.81              0          0          0          0
## 74.2               0          0          0          0
## 74.23              0          0          0          0
## 74.33              0          0          0          0
## 74.65              0          0          0          0
## 74.72              0          0          0          0
## 75.89              0          0          0          0
## 76.1               0          0          0          0
## 76.2               0          0          0          0
## 76.31              0          0          0          0
## 76.39              0          0          0          0
## 76.53              0          0          0          0
## 76.83              0          0          0          0
## 77.61              0          0          0          0
## 78.11              0          0          0          0
## 78.18              0          0          0          0
## 78.27              0          0          0          0
## 78.29              0          0          0          0
## 78.54              0          0          0          0
## 78.85              0          0          0          0
## 79.08              0          0          0          0
## 79.19              0          0          0          0
## 79.42              0          0          1          0
## 79.83              0          0          0          0
## 81.25              0          0          0          0
## 81.72              0          0          0          0
## 81.92              0          0          0          0
## 82.53              0          0          0          0
## 82.57              0          0          0          0
## 82.85              0          0          0          0
## 82.89              0          0          0          0
## 83.51              0          0          0          0
## 85.63              0          0          0          0
## 86.18              0          0          0          0
## 86.34              0          0          0          0
## 86.87              0          0          0          0
## 87.19              0          0          0          0
## 87.21              0          0          0          0
## 87.38              0          0          0          0
## 87.88              0          0          0          0
## 88.05              0          0          0          0
## 88.06              0          0          0          0
## 88.44              0          0          0          0
## 89.75              0          0          0          0
## 89.79              0          0          0          0
## 90.3               0          0          0          0
## 90.96              0          0          0          0
## 91.12              0          0          0          0
## 91.38              0          0          0          0
## 91.43              0          0          0          0
## 92.51              0          0          0          0
## 93.97              0          0          0          0
## 94.15              0          0          0          0
```

```
## 94.37               0              0              0              0
## 94.57               0              0              0              0
## 95.5                0              0              0              0
## 96.03               0              0              0              0
## 96.12               0              0              0              0
## 96.73               0              0              0              0
## 97.4                0              0              0              0
## 98.73               0              0              0              0
## 98.78               0              0              0              0
## 102.1               0              0              0              0
## 102.7               0              0              0              0
## 104.1               0              0              0              0
## 105.8               0              0              0              0
## 106.3               1              0              0              0
## 109                 0              0              0              0
## 110.1               0              0              0              0
## 111.2               0              0              0              0
## 111.8               0              0              0              0
## 113.4               0              0              0              0
## 116                 0              0              0              0
## 121.1               0              0              0              0
## 122.8               0              0              0              0
## 123.6               0              0              0              0
## 123.7               0              0              0              0
## 124.4               0              0              0              0
## 124.8               0              0              0              0
## 126.2               0              0              0              0
## 129.5               0              0              0              0
## 131.2               0              0              0              0
## 132.4               0              0              0              0
## 132.9               0              0              0              0
## 133.8               0              0              0              0
## 134.7               0              0              0              0
## 135.7               0              0              0              0
## 137.8               0              0              0              0
## 138.9               0              0              0              0
## 182.1               0              0              0              0
##        svm.pred
## actual  1.14829800062511 1.14839564853221 1.15282390270994 1.15461742702949
## 54.42               0              0              0              0
## 54.53               0              0              0              0
## 59.96               0              0              0              0
## 61.24               0              0              0              0
## 61.49               0              0              0              0
## 62.5                0              0              0              0
## 63.19               0              0              0              0
## 63.76               0              0              0              0
## 64.12               0              0              0              0
## 64.55               0              0              0              0
## 65.67               0              0              0              0
## 65.75               0              0              0              0
## 66.2                0              0              0              0
## 66.52               0              0              0              0
## 66.72               0              0              0              0
```

```
## 68.51              0             0             0             0
## 70.39              0             0             0             0
## 71.73              0             0             0             0
## 72.49              0             0             1             0
## 72.76              0             0             0             0
## 73.16              0             0             0             0
## 73.34              0             0             0             0
## 73.7               0             0             0             0
## 73.81              0             0             0             0
## 74.2               0             0             0             0
## 74.23              0             0             0             0
## 74.33              0             0             0             0
## 74.65              0             0             0             0
## 74.72              0             0             0             0
## 75.89              0             0             0             0
## 76.1               0             0             0             0
## 76.2               0             0             0             0
## 76.31              0             0             0             0
## 76.39              0             0             0             0
## 76.53              0             0             0             0
## 76.83              0             0             0             0
## 77.61              0             0             0             0
## 78.11              0             0             0             0
## 78.18              0             0             0             0
## 78.27              0             0             0             0
## 78.29              0             0             0             0
## 78.54              1             0             0             0
## 78.85              0             0             0             0
## 79.08              0             0             0             0
## 79.19              0             0             0             0
## 79.42              0             0             0             0
## 79.83              0             0             0             0
## 81.25              0             0             0             0
## 81.72              0             0             0             0
## 81.92              0             0             0             0
## 82.53              0             0             0             0
## 82.57              0             0             0             0
## 82.85              0             0             0             0
## 82.89              0             0             0             0
## 83.51              0             0             0             0
## 85.63              0             0             0             0
## 86.18              0             0             0             0
## 86.34              0             0             0             1
## 86.87              0             0             0             0
## 87.19              0             0             0             0
## 87.21              0             0             0             0
## 87.38              0             0             0             0
## 87.88              0             0             0             0
## 88.05              0             0             0             0
## 88.06              0             0             0             0
## 88.44              0             0             0             0
## 89.75              0             0             0             0
## 89.79              0             0             0             0
## 90.3               0             0             0             0
```

```
##   90.96             0             0             0             0
##   91.12             0             0             0             0
##   91.38             0             0             0             0
##   91.43             0             0             0             0
##   92.51             0             0             0             0
##   93.97             0             0             0             0
##   94.15             0             0             0             0
##   94.37             0             0             0             0
##   94.57             0             0             0             0
##   95.5              0             0             0             0
##   96.03             0             0             0             0
##   96.12             0             0             0             0
##   96.73             0             0             0             0
##   97.4              0             0             0             0
##   98.73             0             1             0             0
##   98.78             0             0             0             0
##   102.1             0             0             0             0
##   102.7             0             0             0             0
##   104.1             0             0             0             0
##   105.8             0             0             0             0
##   106.3             0             0             0             0
##   109               0             0             0             0
##   110.1             0             0             0             0
##   111.2             0             0             0             0
##   111.8             0             0             0             0
##   113.4             0             0             0             0
##   116               0             0             0             0
##   121.1             0             0             0             0
##   122.8             0             0             0             0
##   123.6             0             0             0             0
##   123.7             0             0             0             0
##   124.4             0             0             0             0
##   124.8             0             0             0             0
##   126.2             0             0             0             0
##   129.5             0             0             0             0
##   131.2             0             0             0             0
##   132.4             0             0             0             0
##   132.9             0             0             0             0
##   133.8             0             0             0             0
##   134.7             0             0             0             0
##   135.7             0             0             0             0
##   137.8             0             0             0             0
##   138.9             0             0             0             0
##   182.1             0             0             0             0
##        svm.pred
## actual  1.15556279629757 1.15656894346615 1.16829218088804 1.1700196830037
##   54.42             0             0             0             0
##   54.53             0             0             0             0
##   59.96             0             0             0             0
##   61.24             0             0             0             0
##   61.49             0             0             0             0
##   62.5              0             0             0             0
##   63.19             0             0             0             0
##   63.76             0             0             0             0
```

```
## 64.12                  0              0              0              0
## 64.55                  0              0              0              0
## 65.67                  0              0              0              0
## 65.75                  0              0              0              0
## 66.2                   0              0              0              0
## 66.52                  0              0              0              0
## 66.72                  0              0              0              0
## 68.51                  0              0              0              0
## 70.39                  0              0              0              0
## 71.73                  0              0              0              0
## 72.49                  0              0              0              0
## 72.76                  0              0              0              0
## 73.16                  0              0              0              0
## 73.34                  0              0              0              0
## 73.7                   0              0              0              0
## 73.81                  0              0              0              0
## 74.2                   0              0              0              0
## 74.23                  0              0              0              0
## 74.33                  0              0              0              0
## 74.65                  0              0              0              0
## 74.72                  0              0              0              0
## 75.89                  0              0              0              0
## 76.1                   0              0              0              1
## 76.2                   0              0              0              0
## 76.31                  0              0              0              0
## 76.39                  0              0              0              0
## 76.53                  0              0              0              0
## 76.83                  0              0              0              0
## 77.61                  0              0              0              0
## 78.11                  0              0              0              0
## 78.18                  0              0              0              0
## 78.27                  0              0              0              0
## 78.29                  0              0              0              0
## 78.54                  0              0              0              0
## 78.85                  0              0              0              0
## 79.08                  0              0              0              0
## 79.19                  0              0              0              0
## 79.42                  0              0              0              0
## 79.83                  0              0              0              0
## 81.25                  0              0              0              0
## 81.72                  0              1              0              0
## 81.92                  0              0              0              0
## 82.53                  0              0              0              0
## 82.57                  0              0              0              0
## 82.85                  0              0              0              0
## 82.89                  0              0              0              0
## 83.51                  0              0              0              0
## 85.63                  0              0              0              0
## 86.18                  0              0              1              0
## 86.34                  0              0              0              0
## 86.87                  0              0              0              0
## 87.19                  0              0              0              0
## 87.21                  0              0              0              0
## 87.38                  0              0              0              0
```

```
##    87.88                 0               0               0               0
##    88.05                 0               0               0               0
##    88.06                 0               0               0               0
##    88.44                 0               0               0               0
##    89.75                 0               0               0               0
##    89.79                 0               0               0               0
##    90.3                  0               0               0               0
##    90.96                 0               0               0               0
##    91.12                 0               0               0               0
##    91.38                 0               0               0               0
##    91.43                 0               0               0               0
##    92.51                 0               0               0               0
##    93.97                 0               0               0               0
##    94.15                 0               0               0               0
##    94.37                 0               0               0               0
##    94.57                 1               0               0               0
##    95.5                  0               0               0               0
##    96.03                 0               0               0               0
##    96.12                 0               0               0               0
##    96.73                 0               0               0               0
##    97.4                  0               0               0               0
##    98.73                 0               0               0               0
##    98.78                 0               0               0               0
##    102.1                 0               0               0               0
##    102.7                 0               0               0               0
##    104.1                 0               0               0               0
##    105.8                 0               0               0               0
##    106.3                 0               0               0               0
##    109                   0               0               0               0
##    110.1                 0               0               0               0
##    111.2                 0               0               0               0
##    111.8                 0               0               0               0
##    113.4                 0               0               0               0
##    116                   0               0               0               0
##    121.1                 0               0               0               0
##    122.8                 0               0               0               0
##    123.6                 0               0               0               0
##    123.7                 0               0               0               0
##    124.4                 0               0               0               0
##    124.8                 0               0               0               0
##    126.2                 0               0               0               0
##    129.5                 0               0               0               0
##    131.2                 0               0               0               0
##    132.4                 0               0               0               0
##    132.9                 0               0               0               0
##    133.8                 0               0               0               0
##    134.7                 0               0               0               0
##    135.7                 0               0               0               0
##    137.8                 0               0               0               0
##    138.9                 0               0               0               0
##    182.1                 0               0               0               0
##         svm.pred
## actual  1.17553861452027 1.19181350685173 1.19366369642029 1.20038296367908
##    54.42                 0               0               0               0
```

```
## 54.53              0              0              0              0
## 59.96              0              0              0              0
## 61.24              0              0              0              0
## 61.49              0              0              0              0
## 62.5               0              0              0              0
## 63.19              0              0              0              0
## 63.76              0              0              0              0
## 64.12              0              0              0              0
## 64.55              0              0              0              0
## 65.67              0              0              0              0
## 65.75              0              0              0              0
## 66.2               0              0              0              0
## 66.52              0              0              0              0
## 66.72              0              0              0              0
## 68.51              0              0              0              0
## 70.39              0              0              0              0
## 71.73              0              0              0              0
## 72.49              0              0              0              0
## 72.76              0              0              0              0
## 73.16              0              0              0              0
## 73.34              0              0              0              0
## 73.7               0              0              0              0
## 73.81              0              0              0              0
## 74.2               0              0              0              0
## 74.23              0              0              0              0
## 74.33              0              0              0              0
## 74.65              0              0              0              0
## 74.72              0              0              0              0
## 75.89              0              0              0              0
## 76.1               0              0              0              0
## 76.2               0              1              0              0
## 76.31              0              0              0              0
## 76.39              0              0              0              0
## 76.53              0              0              0              0
## 76.83              0              0              0              0
## 77.61              0              0              0              0
## 78.11              0              0              0              0
## 78.18              0              0              0              0
## 78.27              0              0              0              0
## 78.29              0              0              0              0
## 78.54              0              0              0              0
## 78.85              0              0              0              0
## 79.08              0              0              0              0
## 79.19              0              0              0              0
## 79.42              0              0              0              0
## 79.83              0              0              0              0
## 81.25              0              0              0              0
## 81.72              0              0              0              0
## 81.92              0              0              0              0
## 82.53              0              0              0              0
## 82.57              0              0              0              0
## 82.85              0              0              0              0
## 82.89              0              0              0              0
## 83.51              0              0              0              0
```

```
##    85.63              0            0            0            0
##    86.18              0            0            0            0
##    86.34              0            0            0            0
##    86.87              0            0            0            0
##    87.19              0            0            0            0
##    87.21              0            0            0            0
##    87.38              0            0            0            0
##    87.88              0            0            0            0
##    88.05              0            0            0            0
##    88.06              0            0            0            0
##    88.44              0            0            0            0
##    89.75              0            0            0            0
##    89.79              0            0            0            0
##    90.3               0            0            0            0
##    90.96              0            0            0            0
##    91.12              0            0            0            0
##    91.38              0            0            0            0
##    91.43              0            0            0            0
##    92.51              0            0            1            0
##    93.97              0            0            0            0
##    94.15              0            0            0            1
##    94.37              0            0            0            0
##    94.57              0            0            0            0
##    95.5               0            0            0            0
##    96.03              0            0            0            0
##    96.12              1            0            0            0
##    96.73              0            0            0            0
##    97.4               0            0            0            0
##    98.73              0            0            0            0
##    98.78              0            0            0            0
##    102.1              0            0            0            0
##    102.7              0            0            0            0
##    104.1              0            0            0            0
##    105.8              0            0            0            0
##    106.3              0            0            0            0
##    109                0            0            0            0
##    110.1              0            0            0            0
##    111.2              0            0            0            0
##    111.8              0            0            0            0
##    113.4              0            0            0            0
##    116                0            0            0            0
##    121.1              0            0            0            0
##    122.8              0            0            0            0
##    123.6              0            0            0            0
##    123.7              0            0            0            0
##    124.4              0            0            0            0
##    124.8              0            0            0            0
##    126.2              0            0            0            0
##    129.5              0            0            0            0
##    131.2              0            0            0            0
##    132.4              0            0            0            0
##    132.9              0            0            0            0
##    133.8              0            0            0            0
##    134.7              0            0            0            0
```

```
## 135.7                 0              0              0              0
## 137.8                 0              0              0              0
## 138.9                 0              0              0              0
## 182.1                 0              0              0              0
##        svm.pred
## actual  1.20410468945393 1.26251274653249 1.30186993601586 1.32602490804893
## 54.42                 0              0              0              0
## 54.53                 0              0              0              0
## 59.96                 0              0              0              0
## 61.24                 0              0              0              0
## 61.49                 0              0              0              0
## 62.5                  0              0              0              0
## 63.19                 0              0              0              0
## 63.76                 0              0              0              0
## 64.12                 1              0              0              0
## 64.55                 0              0              0              0
## 65.67                 0              0              0              0
## 65.75                 0              0              0              0
## 66.2                  0              0              0              0
## 66.52                 0              0              0              0
## 66.72                 0              0              0              0
## 68.51                 0              0              0              0
## 70.39                 0              0              0              0
## 71.73                 0              0              0              0
## 72.49                 0              0              0              0
## 72.76                 0              0              0              0
## 73.16                 0              0              0              0
## 73.34                 0              0              0              0
## 73.7                  0              0              0              0
## 73.81                 0              0              0              0
## 74.2                  0              0              0              0
## 74.23                 0              0              0              0
## 74.33                 0              0              0              0
## 74.65                 0              0              0              0
## 74.72                 0              0              0              0
## 75.89                 0              0              0              0
## 76.1                  0              0              0              0
## 76.2                  0              0              0              0
## 76.31                 0              0              0              0
## 76.39                 0              0              0              0
## 76.53                 0              0              0              0
## 76.83                 0              0              0              0
## 77.61                 0              0              0              0
## 78.11                 0              0              0              0
## 78.18                 0              0              0              0
## 78.27                 0              0              0              0
## 78.29                 0              0              0              0
## 78.54                 0              0              0              0
## 78.85                 0              0              0              0
## 79.08                 0              0              0              0
## 79.19                 0              0              0              0
## 79.42                 0              0              0              0
## 79.83                 0              0              0              0
## 81.25                 0              0              0              0
```

```
##   81.72          0               0               0               0
##   81.92          0               0               0               0
##   82.53          0               0               0               0
##   82.57          0               0               0               0
##   82.85          0               0               0               0
##   82.89          0               0               0               0
##   83.51          0               0               1               0
##   85.63          0               0               0               0
##   86.18          0               0               0               0
##   86.34          0               0               0               0
##   86.87          0               0               0               0
##   87.19          0               0               0               0
##   87.21          0               0               0               0
##   87.38          0               0               0               0
##   87.88          0               0               0               0
##   88.05          0               0               0               0
##   88.06          0               0               0               0
##   88.44          0               0               0               0
##   89.75          0               0               0               0
##   89.79          0               0               0               0
##   90.3           0               0               0               0
##   90.96          0               0               0               0
##   91.12          0               0               0               0
##   91.38          0               1               0               0
##   91.43          0               0               0               1
##   92.51          0               0               0               0
##   93.97          0               0               0               0
##   94.15          0               0               0               0
##   94.37          0               0               0               0
##   94.57          0               0               0               0
##   95.5           0               0               0               0
##   96.03          0               0               0               0
##   96.12          0               0               0               0
##   96.73          0               0               0               0
##   97.4           0               0               0               0
##   98.73          0               0               0               0
##   98.78          0               0               0               0
##   102.1          0               0               0               0
##   102.7          0               0               0               0
##   104.1          0               0               0               0
##   105.8          0               0               0               0
##   106.3          0               0               0               0
##   109            0               0               0               0
##   110.1          0               0               0               0
##   111.2          0               0               0               0
##   111.8          0               0               0               0
##   113.4          0               0               0               0
##   116            0               0               0               0
##   121.1          0               0               0               0
##   122.8          0               0               0               0
##   123.6          0               0               0               0
##   123.7          0               0               0               0
##   124.4          0               0               0               0
##   124.8          0               0               0               0
```

```
##    126.2                    0               0               0               0
##    129.5                    0               0               0               0
##    131.2                    0               0               0               0
##    132.4                    0               0               0               0
##    132.9                    0               0               0               0
##    133.8                    0               0               0               0
##    134.7                    0               0               0               0
##    135.7                    0               0               0               0
##    137.8                    0               0               0               0
##    138.9                    0               0               0               0
##    182.1                    0               0               0               0
##        svm.pred
## actual  1.3656940667366 1.37433677502043 1.47470222110016 1.49823756854706
##    54.42                   0               0               0               0
##    54.53                   0               0               0               0
##    59.96                   0               0               0               0
##    61.24                   0               0               0               0
##    61.49                   0               0               0               0
##    62.5                    0               0               0               0
##    63.19                   0               0               0               0
##    63.76                   0               0               0               0
##    64.12                   0               0               0               0
##    64.55                   0               0               0               0
##    65.67                   0               0               0               0
##    65.75                   0               0               0               0
##    66.2                    0               0               0               0
##    66.52                   0               0               0               0
##    66.72                   0               0               0               0
##    68.51                   0               0               0               0
##    70.39                   0               0               0               0
##    71.73                   0               0               0               0
##    72.49                   0               0               0               0
##    72.76                   0               0               0               0
##    73.16                   0               0               0               0
##    73.34                   0               0               0               0
##    73.7                    0               0               0               0
##    73.81                   0               0               0               0
##    74.2                    0               0               0               0
##    74.23                   0               0               0               0
##    74.33                   0               0               0               0
##    74.65                   0               0               0               0
##    74.72                   0               0               0               0
##    75.89                   0               0               0               0
##    76.1                    0               0               0               0
##    76.2                    0               0               0               0
##    76.31                   0               0               0               0
##    76.39                   0               0               0               0
##    76.53                   0               0               0               0
##    76.83                   0               0               0               0
##    77.61                   0               0               0               0
##    78.11                   0               0               0               0
##    78.18                   0               0               0               0
##    78.27                   0               0               0               0
##    78.29                   0               0               0               0
```

```
##   78.54              0              0              0              0
##   78.85              0              0              0              0
##   79.08              0              0              0              0
##   79.19              0              0              0              0
##   79.42              0              0              0              0
##   79.83              0              0              0              0
##   81.25              0              0              0              0
##   81.72              0              0              0              0
##   81.92              0              0              0              0
##   82.53              0              0              0              0
##   82.57              0              0              0              0
##   82.85              0              0              0              0
##   82.89              0              0              0              0
##   83.51              0              0              0              0
##   85.63              0              0              0              0
##   86.18              0              0              0              0
##   86.34              0              0              0              0
##   86.87              0              0              0              0
##   87.19              0              0              0              0
##   87.21              0              0              0              0
##   87.38              0              0              0              0
##   87.88              0              0              0              0
##   88.05              0              0              0              0
##   88.06              0              0              0              0
##   88.44              0              0              0              0
##   89.75              0              0              0              0
##   89.79              0              0              0              0
##   90.3               0              0              0              0
##   90.96              0              0              0              1
##   91.12              0              0              0              0
##   91.38              0              0              0              0
##   91.43              0              0              0              0
##   92.51              0              0              0              0
##   93.97              0              0              1              0
##   94.15              0              0              0              0
##   94.37              0              0              0              0
##   94.57              0              0              0              0
##   95.5               0              0              0              0
##   96.03              1              0              0              0
##   96.12              0              0              0              0
##   96.73              0              0              0              0
##   97.4               0              0              0              0
##   98.73              0              0              0              0
##   98.78              0              1              0              0
##   102.1              0              0              0              0
##   102.7              0              0              0              0
##   104.1              0              0              0              0
##   105.8              0              0              0              0
##   106.3              0              0              0              0
##   109                0              0              0              0
##   110.1              0              0              0              0
##   111.2              0              0              0              0
##   111.8              0              0              0              0
##   113.4              0              0              0              0
```

```
##   116                0                 0                 0                 0
##   121.1              0                 0                 0                 0
##   122.8              0                 0                 0                 0
##   123.6              0                 0                 0                 0
##   123.7              0                 0                 0                 0
##   124.4              0                 0                 0                 0
##   124.8              0                 0                 0                 0
##   126.2              0                 0                 0                 0
##   129.5              0                 0                 0                 0
##   131.2              0                 0                 0                 0
##   132.4              0                 0                 0                 0
##   132.9              0                 0                 0                 0
##   133.8              0                 0                 0                 0
##   134.7              0                 0                 0                 0
##   135.7              0                 0                 0                 0
##   137.8              0                 0                 0                 0
##   138.9              0                 0                 0                 0
##   182.1              0                 0                 0                 0
##        svm.pred
## actual  1.53960568007185 1.60515021448866 1.66007323548568 1.69895871120563
##   54.42              0                 0                 0                 0
##   54.53              0                 0                 0                 0
##   59.96              0                 0                 0                 0
##   61.24              0                 0                 0                 0
##   61.49              0                 0                 0                 0
##   62.5               0                 0                 0                 0
##   63.19              0                 0                 0                 0
##   63.76              0                 0                 0                 0
##   64.12              0                 0                 0                 0
##   64.55              0                 0                 0                 0
##   65.67              0                 0                 0                 0
##   65.75              0                 0                 0                 0
##   66.2               0                 0                 0                 0
##   66.52              0                 0                 0                 0
##   66.72              0                 0                 0                 0
##   68.51              0                 0                 0                 0
##   70.39              0                 0                 0                 0
##   71.73              0                 0                 0                 0
##   72.49              0                 0                 0                 0
##   72.76              0                 0                 0                 0
##   73.16              0                 0                 0                 0
##   73.34              0                 0                 0                 0
##   73.7               0                 0                 0                 0
##   73.81              0                 0                 0                 0
##   74.2               0                 0                 0                 0
##   74.23              0                 0                 0                 0
##   74.33              0                 0                 0                 0
##   74.65              0                 0                 0                 0
##   74.72              0                 0                 0                 0
##   75.89              0                 0                 0                 0
##   76.1               0                 0                 0                 0
##   76.2               0                 0                 0                 0
##   76.31              0                 0                 0                 0
##   76.39              0                 0                 0                 0
```

```
## 76.53           0           0           0           0
## 76.83           0           0           0           0
## 77.61           0           0           0           0
## 78.11           0           0           0           0
## 78.18           0           0           0           0
## 78.27           0           0           0           0
## 78.29           0           0           0           0
## 78.54           0           0           0           0
## 78.85           0           0           0           0
## 79.08           0           0           0           0
## 79.19           0           0           0           0
## 79.42           0           0           0           0
## 79.83           0           0           0           0
## 81.25           0           0           0           0
## 81.72           0           0           0           0
## 81.92           0           0           0           0
## 82.53           0           0           0           0
## 82.57           0           0           0           0
## 82.85           0           0           0           0
## 82.89           0           0           0           0
## 83.51           0           0           0           0
## 85.63           0           0           0           0
## 86.18           0           0           0           0
## 86.34           0           0           0           0
## 86.87           0           0           0           0
## 87.19           0           0           0           0
## 87.21           0           0           0           0
## 87.38           0           0           0           0
## 87.88           0           0           0           0
## 88.05           1           0           0           0
## 88.06           0           0           0           0
## 88.44           0           0           0           0
## 89.75           0           0           0           0
## 89.79           0           0           0           0
## 90.3            0           0           0           0
## 90.96           0           0           0           0
## 91.12           0           0           0           0
## 91.38           0           0           0           0
## 91.43           0           0           0           0
## 92.51           0           0           0           0
## 93.97           0           0           0           0
## 94.15           0           0           0           0
## 94.37           0           0           0           1
## 94.57           0           0           0           0
## 95.5            0           0           0           0
## 96.03           0           0           0           0
## 96.12           0           0           0           0
## 96.73           0           0           0           0
## 97.4            0           0           0           0
## 98.73           0           0           0           0
## 98.78           0           0           0           0
## 102.1           0           0           0           0
## 102.7           0           1           0           0
## 104.1           0           0           0           0
```

```
##   105.8               0               0               1               0
##   106.3               0               0               0               0
##   109                 0               0               0               0
##   110.1               0               0               0               0
##   111.2               0               0               0               0
##   111.8               0               0               0               0
##   113.4               0               0               0               0
##   116                 0               0               0               0
##   121.1               0               0               0               0
##   122.8               0               0               0               0
##   123.6               0               0               0               0
##   123.7               0               0               0               0
##   124.4               0               0               0               0
##   124.8               0               0               0               0
##   126.2               0               0               0               0
##   129.5               0               0               0               0
##   131.2               0               0               0               0
##   132.4               0               0               0               0
##   132.9               0               0               0               0
##   133.8               0               0               0               0
##   134.7               0               0               0               0
##   135.7               0               0               0               0
##   137.8               0               0               0               0
##   138.9               0               0               0               0
##   182.1               0               0               0               0
##        svm.pred
## actual  1.7225299958711 1.80402454227692 1.80759608948921 1.81480521961661
##   54.42               0               0               0               0
##   54.53               0               0               0               0
##   59.96               0               0               0               0
##   61.24               0               0               0               0
##   61.49               0               0               0               0
##   62.5                0               0               0               0
##   63.19               0               0               0               0
##   63.76               0               0               0               0
##   64.12               0               0               0               0
##   64.55               0               0               0               0
##   65.67               0               0               0               0
##   65.75               0               0               0               0
##   66.2                0               0               0               0
##   66.52               0               0               0               0
##   66.72               0               0               0               0
##   68.51               0               0               0               0
##   70.39               0               0               0               0
##   71.73               0               0               0               0
##   72.49               0               0               0               0
##   72.76               0               0               0               0
##   73.16               0               0               0               0
##   73.34               0               0               0               0
##   73.7                0               0               0               0
##   73.81               0               0               0               0
##   74.2                0               0               0               0
##   74.23               0               0               0               0
##   74.33               0               0               0               0
```

```
##    74.65          0          0          0          0
##    74.72          0          0          0          0
##    75.89          0          0          0          0
##    76.1           0          0          0          0
##    76.2           0          0          0          0
##    76.31          0          0          0          0
##    76.39          0          0          0          0
##    76.53          0          0          0          0
##    76.83          0          0          0          0
##    77.61          0          0          0          0
##    78.11          0          0          0          0
##    78.18          0          0          0          0
##    78.27          0          0          0          0
##    78.29          0          0          0          0
##    78.54          0          0          0          0
##    78.85          0          0          0          0
##    79.08          0          0          0          0
##    79.19          0          0          0          0
##    79.42          0          0          0          0
##    79.83          0          0          0          0
##    81.25          0          0          0          0
##    81.72          0          0          0          0
##    81.92          0          0          0          0
##    82.53          0          0          0          0
##    82.57          0          0          1          0
##    82.85          0          0          0          0
##    82.89          0          0          0          0
##    83.51          0          0          0          0
##    85.63          0          0          0          0
##    86.18          0          0          0          0
##    86.34          0          0          0          0
##    86.87          0          0          0          0
##    87.19          0          0          0          0
##    87.21          0          0          0          1
##    87.38          0          0          0          0
##    87.88          0          0          0          0
##    88.05          0          0          0          0
##    88.06          0          0          0          0
##    88.44          0          0          0          0
##    89.75          0          0          0          0
##    89.79          0          0          0          0
##    90.3           0          0          0          0
##    90.96          0          0          0          0
##    91.12          0          0          0          0
##    91.38          0          0          0          0
##    91.43          0          0          0          0
##    92.51          0          0          0          0
##    93.97          0          0          0          0
##    94.15          0          0          0          0
##    94.37          0          0          0          0
##    94.57          0          0          0          0
##    95.5           0          0          0          0
##    96.03          0          0          0          0
##    96.12          0          0          0          0
```

```
## 96.73               0               0               0               0
## 97.4                0               0               0               0
## 98.73               0               0               0               0
## 98.78               0               0               0               0
## 102.1               0               0               0               0
## 102.7               0               0               0               0
## 104.1               0               0               0               0
## 105.8               0               0               0               0
## 106.3               0               0               0               0
## 109                 0               0               0               0
## 110.1               0               0               0               0
## 111.2               1               0               0               0
## 111.8               0               0               0               0
## 113.4               0               0               0               0
## 116                 0               0               0               0
## 121.1               0               0               0               0
## 122.8               0               0               0               0
## 123.6               0               0               0               0
## 123.7               0               0               0               0
## 124.4               0               0               0               0
## 124.8               0               0               0               0
## 126.2               0               0               0               0
## 129.5               0               0               0               0
## 131.2               0               0               0               0
## 132.4               0               0               0               0
## 132.9               0               0               0               0
## 133.8               0               0               0               0
## 134.7               0               1               0               0
## 135.7               0               0               0               0
## 137.8               0               0               0               0
## 138.9               0               0               0               0
## 182.1               0               0               0               0
##        svm.pred
## actual  1.81938597632778 1.83087195674349 1.89286591745649 1.89289019806533
## 54.42               0               0               0               0
## 54.53               0               0               0               0
## 59.96               0               0               0               0
## 61.24               0               0               0               0
## 61.49               0               0               0               0
## 62.5                0               0               0               0
## 63.19               0               0               0               0
## 63.76               0               0               0               0
## 64.12               0               0               0               0
## 64.55               0               0               0               0
## 65.67               0               0               0               0
## 65.75               0               0               0               0
## 66.2                0               0               0               0
## 66.52               0               0               0               0
## 66.72               0               0               0               0
## 68.51               0               0               0               0
## 70.39               0               0               0               0
## 71.73               0               0               0               0
## 72.49               0               0               0               0
## 72.76               0               0               0               0
```

```
## 73.16                 0              0              0              0
## 73.34                 0              0              0              0
## 73.7                  0              0              0              0
## 73.81                 0              0              0              0
## 74.2                  0              0              0              0
## 74.23                 0              0              0              0
## 74.33                 0              0              0              0
## 74.65                 0              0              0              0
## 74.72                 0              0              0              0
## 75.89                 0              0              0              0
## 76.1                  0              0              0              0
## 76.2                  0              0              0              0
## 76.31                 0              0              0              0
## 76.39                 0              0              0              0
## 76.53                 0              0              0              0
## 76.83                 0              0              0              0
## 77.61                 0              0              0              0
## 78.11                 0              0              0              0
## 78.18                 0              0              0              0
## 78.27                 0              0              0              0
## 78.29                 0              0              0              0
## 78.54                 0              0              0              0
## 78.85                 0              0              0              0
## 79.08                 0              0              0              0
## 79.19                 0              0              0              0
## 79.42                 0              0              0              0
## 79.83                 0              0              0              0
## 81.25                 0              0              0              0
## 81.72                 0              0              0              0
## 81.92                 0              0              0              0
## 82.53                 0              0              0              0
## 82.57                 0              0              0              0
## 82.85                 0              0              0              0
## 82.89                 0              0              0              0
## 83.51                 0              0              0              0
## 85.63                 0              0              0              0
## 86.18                 0              0              0              0
## 86.34                 0              0              0              0
## 86.87                 0              0              0              0
## 87.19                 0              0              0              0
## 87.21                 0              0              0              0
## 87.38                 0              0              0              0
## 87.88                 0              0              0              0
## 88.05                 0              0              0              0
## 88.06                 0              0              0              0
## 88.44                 0              0              0              0
## 89.75                 0              0              0              0
## 89.79                 0              0              0              0
## 90.3                  0              0              0              0
## 90.96                 0              0              0              0
## 91.12                 1              0              0              0
## 91.38                 0              0              0              0
## 91.43                 0              0              0              0
## 92.51                 0              0              0              0
```

```
##   93.97              0              0              0              0
##   94.15              0              0              0              0
##   94.37              0              0              0              0
##   94.57              0              0              0              0
##   95.5               0              0              0              0
##   96.03              0              0              0              0
##   96.12              0              0              0              0
##   96.73              0              0              0              0
##   97.4               0              0              0              0
##   98.73              0              0              0              0
##   98.78              0              0              0              0
##   102.1              0              0              0              0
##   102.7              0              0              0              0
##   104.1              0              0              0              0
##   105.8              0              0              0              0
##   106.3              0              0              0              0
##   109                0              0              0              0
##   110.1              0              0              0              0
##   111.2              0              0              0              0
##   111.8              0              0              0              0
##   113.4              0              0              0              0
##   116                0              0              0              0
##   121.1              0              0              0              0
##   122.8              0              0              0              1
##   123.6              0              0              0              0
##   123.7              0              0              0              0
##   124.4              0              0              0              0
##   124.8              0              0              0              0
##   126.2              0              0              0              0
##   129.5              0              0              0              0
##   131.2              0              0              0              0
##   132.4              0              0              0              0
##   132.9              0              0              0              0
##   133.8              0              0              0              0
##   134.7              0              0              0              0
##   135.7              0              1              0              0
##   137.8              0              0              0              0
##   138.9              0              0              0              0
##   182.1              0              0              1              0
##        svm.pred
## actual  1.90486039528059 1.92121573742359 1.92441782969331 1.94042262832078
##   54.42              0              0              0              0
##   54.53              0              0              0              0
##   59.96              0              0              0              0
##   61.24              0              0              0              0
##   61.49              0              0              0              0
##   62.5               0              0              0              0
##   63.19              0              0              0              0
##   63.76              0              0              0              0
##   64.12              0              0              0              0
##   64.55              0              0              0              0
##   65.67              0              0              0              0
##   65.75              0              0              0              0
##   66.2               0              0              0              0
```

```
## 66.52                0          0          0          0
## 66.72                0          0          0          0
## 68.51                0          0          0          0
## 70.39                0          0          0          0
## 71.73                0          0          0          0
## 72.49                0          0          0          0
## 72.76                0          0          0          0
## 73.16                0          0          0          0
## 73.34                0          0          0          0
## 73.7                 0          0          0          0
## 73.81                0          0          0          0
## 74.2                 0          0          0          0
## 74.23                0          0          0          0
## 74.33                0          0          0          0
## 74.65                0          0          0          0
## 74.72                0          0          0          0
## 75.89                0          0          0          0
## 76.1                 0          0          0          0
## 76.2                 0          0          0          0
## 76.31                0          0          0          0
## 76.39                0          0          0          0
## 76.53                0          0          0          0
## 76.83                0          0          0          0
## 77.61                0          0          0          0
## 78.11                0          0          0          0
## 78.18                0          0          0          0
## 78.27                0          0          0          0
## 78.29                0          0          0          0
## 78.54                0          0          0          0
## 78.85                0          0          0          0
## 79.08                0          0          0          0
## 79.19                0          0          0          0
## 79.42                0          0          0          0
## 79.83                0          0          0          0
## 81.25                0          0          0          0
## 81.72                0          0          0          0
## 81.92                0          0          0          0
## 82.53                0          0          0          0
## 82.57                0          0          0          0
## 82.85                0          0          0          0
## 82.89                0          0          0          0
## 83.51                0          0          0          0
## 85.63                0          0          0          0
## 86.18                0          0          0          0
## 86.34                0          0          0          0
## 86.87                0          0          0          0
## 87.19                0          0          0          0
## 87.21                0          0          0          0
## 87.38                0          0          0          0
## 87.88                0          0          0          0
## 88.05                0          0          0          0
## 88.06                0          0          0          0
## 88.44                0          0          0          0
## 89.75                0          0          0          0
```

```
##    89.79                0                0                0                0
##    90.3                 0                0                0                0
##    90.96                0                0                0                0
##    91.12                0                0                0                0
##    91.38                0                0                0                0
##    91.43                0                0                0                0
##    92.51                0                0                0                0
##    93.97                0                0                0                0
##    94.15                0                0                0                0
##    94.37                0                0                0                0
##    94.57                0                0                0                0
##    95.5                 0                0                0                0
##    96.03                0                0                0                0
##    96.12                0                0                0                0
##    96.73                0                0                0                0
##    97.4                 0                0                0                0
##    98.73                0                0                0                0
##    98.78                0                0                0                0
##    102.1                0                0                1                0
##    102.7                0                0                0                0
##    104.1                0                1                0                0
##    105.8                0                0                0                0
##    106.3                0                0                0                0
##    109                  0                0                0                0
##    110.1                0                0                0                0
##    111.2                0                0                0                0
##    111.8                0                0                0                0
##    113.4                0                0                0                0
##    116                  1                0                0                0
##    121.1                0                0                0                0
##    122.8                0                0                0                0
##    123.6                0                0                0                0
##    123.7                0                0                0                0
##    124.4                0                0                0                1
##    124.8                0                0                0                0
##    126.2                0                0                0                0
##    129.5                0                0                0                0
##    131.2                0                0                0                0
##    132.4                0                0                0                0
##    132.9                0                0                0                0
##    133.8                0                0                0                0
##    134.7                0                0                0                0
##    135.7                0                0                0                0
##    137.8                0                0                0                0
##    138.9                0                0                0                0
##    182.1                0                0                0                0
##        svm.pred
## actual  1.94206236865766 1.95591330302474 1.9680881934525 1.97308711099322
##    54.42                0                0                0                0
##    54.53                0                0                0                0
##    59.96                0                0                0                0
##    61.24                0                0                0                0
##    61.49                0                0                0                0
##    62.5                 0                0                0                0
```

```
## 63.19              0              0              0              0
## 63.76              0              0              0              0
## 64.12              0              0              0              0
## 64.55              0              0              0              0
## 65.67              0              0              0              0
## 65.75              0              0              0              0
## 66.2               0              0              0              0
## 66.52              0              0              0              0
## 66.72              0              0              0              0
## 68.51              0              0              0              0
## 70.39              0              0              0              0
## 71.73              0              0              0              0
## 72.49              0              0              0              0
## 72.76              0              0              0              0
## 73.16              0              0              0              0
## 73.34              0              0              0              0
## 73.7               0              0              0              0
## 73.81              0              0              0              0
## 74.2               0              0              0              0
## 74.23              0              0              0              0
## 74.33              0              0              0              0
## 74.65              0              0              0              0
## 74.72              0              0              0              0
## 75.89              0              0              0              0
## 76.1               0              0              0              0
## 76.2               0              0              0              0
## 76.31              0              0              0              0
## 76.39              0              0              0              0
## 76.53              0              0              0              0
## 76.83              0              0              0              0
## 77.61              0              0              0              0
## 78.11              0              0              0              0
## 78.18              0              0              0              0
## 78.27              0              0              0              0
## 78.29              0              0              0              0
## 78.54              0              0              0              0
## 78.85              0              0              0              0
## 79.08              0              0              0              0
## 79.19              0              0              0              0
## 79.42              0              0              0              0
## 79.83              0              0              0              0
## 81.25              0              0              0              0
## 81.72              0              0              0              0
## 81.92              0              0              0              0
## 82.53              0              0              0              0
## 82.57              0              0              0              0
## 82.85              0              0              0              0
## 82.89              0              0              0              0
## 83.51              0              0              0              0
## 85.63              0              0              0              0
## 86.18              0              0              0              0
## 86.34              0              0              0              0
## 86.87              0              0              0              0
## 87.19              0              0              0              0
```

```
##    87.21                0                0                0                0
##    87.38                0                0                0                0
##    87.88                0                0                0                0
##    88.05                0                0                0                0
##    88.06                0                0                0                0
##    88.44                0                0                0                0
##    89.75                0                0                0                0
##    89.79                0                0                0                0
##    90.3                 0                0                0                0
##    90.96                0                0                0                0
##    91.12                0                0                0                0
##    91.38                0                0                0                0
##    91.43                0                0                0                0
##    92.51                0                0                0                0
##    93.97                0                0                0                0
##    94.15                0                0                0                0
##    94.37                0                0                0                0
##    94.57                0                0                0                0
##    95.5                 0                0                0                0
##    96.03                0                0                0                0
##    96.12                0                0                0                0
##    96.73                0                0                0                0
##    97.4                 1                0                0                0
##    98.73                0                0                0                0
##    98.78                0                0                0                0
##    102.1                0                0                0                0
##    102.7                0                0                0                0
##    104.1                0                0                0                0
##    105.8                0                0                0                0
##    106.3                0                0                0                0
##    109                  0                0                0                0
##    110.1                0                0                0                0
##    111.2                0                0                0                0
##    111.8                0                0                0                0
##    113.4                0                0                0                0
##    116                  0                0                0                0
##    121.1                0                0                0                0
##    122.8                0                0                0                0
##    123.6                0                0                0                0
##    123.7                0                0                0                0
##    124.4                0                0                0                0
##    124.8                0                0                0                1
##    126.2                0                0                1                0
##    129.5                0                0                0                0
##    131.2                0                0                0                0
##    132.4                0                0                0                0
##    132.9                0                0                0                0
##    133.8                0                0                0                0
##    134.7                0                0                0                0
##    135.7                0                0                0                0
##    137.8                0                0                0                0
##    138.9                0                1                0                0
##    182.1                0                0                0                0
##        svm.pred
```

```
## actual  1.97877173724993 1.98912630749024 1.98991111541176 1.99996247007478
##   54.42                0               0               0               0
##   54.53                0               0               0               0
##   59.96                0               0               0               0
##   61.24                0               0               0               0
##   61.49                0               0               0               0
##   62.5                 0               0               0               0
##   63.19                0               0               0               0
##   63.76                0               0               0               0
##   64.12                0               0               0               0
##   64.55                0               0               0               0
##   65.67                0               0               0               0
##   65.75                0               0               0               0
##   66.2                 0               0               0               0
##   66.52                0               0               0               0
##   66.72                0               0               0               0
##   68.51                0               0               0               0
##   70.39                0               0               0               0
##   71.73                0               0               0               0
##   72.49                0               0               0               0
##   72.76                0               0               0               0
##   73.16                0               0               0               0
##   73.34                0               0               0               0
##   73.7                 0               0               0               0
##   73.81                0               0               0               0
##   74.2                 0               0               0               0
##   74.23                0               0               0               0
##   74.33                0               0               0               0
##   74.65                0               0               0               0
##   74.72                0               0               0               0
##   75.89                0               0               0               0
##   76.1                 0               0               0               0
##   76.2                 0               0               0               0
##   76.31                0               0               0               0
##   76.39                0               0               0               0
##   76.53                0               0               0               0
##   76.83                0               0               0               0
##   77.61                0               0               0               0
##   78.11                0               0               0               0
##   78.18                0               0               0               0
##   78.27                0               0               0               0
##   78.29                0               0               0               0
##   78.54                0               0               0               0
##   78.85                0               0               0               0
##   79.08                0               0               0               0
##   79.19                0               0               0               0
##   79.42                0               0               0               0
##   79.83                0               0               0               0
##   81.25                0               0               0               0
##   81.72                0               0               0               0
##   81.92                0               0               0               0
##   82.53                0               0               0               0
##   82.57                0               0               0               0
##   82.85                0               0               0               0
```

```
## 82.89                    0              0              0              0
## 83.51                    0              0              0              0
## 85.63                    0              0              0              0
## 86.18                    0              0              0              0
## 86.34                    0              0              0              0
## 86.87                    0              0              0              0
## 87.19                    0              0              0              0
## 87.21                    0              0              0              0
## 87.38                    0              0              0              0
## 87.88                    0              0              0              0
## 88.05                    0              0              0              0
## 88.06                    0              0              0              0
## 88.44                    0              0              0              0
## 89.75                    0              0              0              0
## 89.79                    0              0              0              0
## 90.3                     0              0              0              0
## 90.96                    0              0              0              0
## 91.12                    0              0              0              0
## 91.38                    0              0              0              0
## 91.43                    0              0              0              0
## 92.51                    0              0              0              0
## 93.97                    0              0              0              0
## 94.15                    0              0              0              0
## 94.37                    0              0              0              0
## 94.57                    0              0              0              0
## 95.5                     0              0              0              0
## 96.03                    0              0              0              0
## 96.12                    0              0              0              0
## 96.73                    0              0              0              0
## 97.4                     0              0              0              0
## 98.73                    0              0              0              0
## 98.78                    0              0              0              0
## 102.1                    0              0              0              0
## 102.7                    0              0              0              0
## 104.1                    0              0              0              0
## 105.8                    0              0              0              0
## 106.3                    0              0              0              0
## 109                      0              0              0              0
## 110.1                    0              0              0              0
## 111.2                    0              0              0              0
## 111.8                    0              0              0              0
## 113.4                    0              1              0              0
## 116                      0              0              0              0
## 121.1                    0              0              0              0
## 122.8                    0              0              0              0
## 123.6                    0              0              0              0
## 123.7                    0              0              0              1
## 124.4                    0              0              0              0
## 124.8                    0              0              0              0
## 126.2                    0              0              0              0
## 129.5                    0              0              1              0
## 131.2                    1              0              0              0
## 132.4                    0              0              0              0
## 132.9                    0              0              0              0
```

```
##   133.8                0                0                0                0
##   134.7                0                0                0                0
##   135.7                0                0                0                0
##   137.8                0                0                0                0
##   138.9                0                0                0                0
##   182.1                0                0                0                0
##        svm.pred
## actual  2.02543986255012 2.05156486783855 2.05209221127718 2.06194670822561
##   54.42                0                0                0                0
##   54.53                0                0                0                0
##   59.96                0                0                0                0
##   61.24                0                0                0                0
##   61.49                0                0                0                0
##   62.5                 0                0                0                0
##   63.19                0                0                0                0
##   63.76                0                0                0                0
##   64.12                0                0                0                0
##   64.55                0                0                0                0
##   65.67                0                0                0                0
##   65.75                0                0                0                0
##   66.2                 0                0                0                0
##   66.52                0                0                0                0
##   66.72                0                0                0                0
##   68.51                0                0                0                0
##   70.39                0                0                0                0
##   71.73                0                0                0                0
##   72.49                0                0                0                0
##   72.76                0                0                0                0
##   73.16                0                0                0                0
##   73.34                0                0                0                0
##   73.7                 0                0                0                0
##   73.81                0                0                0                0
##   74.2                 0                0                0                0
##   74.23                0                0                0                0
##   74.33                0                0                0                0
##   74.65                0                0                0                0
##   74.72                0                0                0                0
##   75.89                0                0                0                0
##   76.1                 0                0                0                0
##   76.2                 0                0                0                0
##   76.31                0                0                0                0
##   76.39                0                0                0                0
##   76.53                0                0                0                0
##   76.83                0                0                0                0
##   77.61                0                0                0                0
##   78.11                0                0                0                0
##   78.18                0                0                0                0
##   78.27                0                0                0                0
##   78.29                0                0                0                0
##   78.54                0                0                0                0
##   78.85                0                0                0                0
##   79.08                0                0                0                0
##   79.19                0                0                0                0
##   79.42                0                0                0                0
```

```
## 79.83              0            0            0            0
## 81.25              0            0            0            0
## 81.72              0            0            0            0
## 81.92              0            0            0            0
## 82.53              0            0            0            0
## 82.57              0            0            0            0
## 82.85              0            0            0            0
## 82.89              0            0            0            0
## 83.51              0            0            0            0
## 85.63              0            0            0            0
## 86.18              0            0            0            0
## 86.34              0            0            0            0
## 86.87              0            0            0            0
## 87.19              0            0            0            0
## 87.21              0            0            0            0
## 87.38              0            0            0            0
## 87.88              0            0            0            0
## 88.05              0            0            0            0
## 88.06              0            0            0            0
## 88.44              0            0            0            0
## 89.75              0            0            0            0
## 89.79              0            0            0            0
## 90.3               0            0            0            0
## 90.96              0            0            0            0
## 91.12              0            0            0            0
## 91.38              0            0            0            0
## 91.43              0            0            0            0
## 92.51              0            0            0            0
## 93.97              0            0            0            0
## 94.15              0            0            0            0
## 94.37              0            0            0            0
## 94.57              0            0            0            0
## 95.5               0            0            0            0
## 96.03              0            0            0            0
## 96.12              0            0            0            0
## 96.73              0            0            0            0
## 97.4               0            0            0            0
## 98.73              0            0            0            0
## 98.78              0            0            0            0
## 102.1              0            0            0            0
## 102.7              0            0            0            0
## 104.1              0            0            0            0
## 105.8              0            0            0            0
## 106.3              0            0            0            0
## 109                0            0            0            0
## 110.1              0            1            0            0
## 111.2              0            0            0            0
## 111.8              0            0            0            1
## 113.4              0            0            0            0
## 116                0            0            0            0
## 121.1              0            0            0            0
## 122.8              0            0            0            0
## 123.6              0            0            0            0
## 123.7              0            0            0            0
```

```
##    124.4             0             0             0             0
##    124.8             0             0             0             0
##    126.2             0             0             0             0
##    129.5             0             0             0             0
##    131.2             0             0             0             0
##    132.4             0             0             1             0
##    132.9             0             0             0             0
##    133.8             0             0             0             0
##    134.7             0             0             0             0
##    135.7             0             0             0             0
##    137.8             1             0             0             0
##    138.9             0             0             0             0
##    182.1             0             0             0             0
##        svm.pred
## actual  2.06330534269185 2.08103789007547 2.08955243303036 2.09208176381217
##    54.42             0             0             0             0
##    54.53             0             0             0             0
##    59.96             0             0             0             0
##    61.24             0             0             0             0
##    61.49             0             0             0             0
##    62.5              0             0             0             0
##    63.19             0             0             0             0
##    63.76             0             0             0             0
##    64.12             0             0             0             0
##    64.55             0             0             0             0
##    65.67             0             0             0             0
##    65.75             0             0             0             0
##    66.2              0             0             0             0
##    66.52             0             0             0             0
##    66.72             0             0             0             0
##    68.51             0             0             0             0
##    70.39             0             0             0             0
##    71.73             0             0             0             0
##    72.49             0             0             0             0
##    72.76             0             0             0             0
##    73.16             0             0             0             0
##    73.34             0             0             0             0
##    73.7              0             0             0             0
##    73.81             0             0             0             0
##    74.2              0             0             0             0
##    74.23             0             0             0             0
##    74.33             0             0             0             0
##    74.65             0             0             0             0
##    74.72             0             0             0             0
##    75.89             0             0             0             0
##    76.1              0             0             0             0
##    76.2              0             0             0             0
##    76.31             0             0             0             0
##    76.39             0             0             0             0
##    76.53             0             0             0             0
##    76.83             0             0             0             0
##    77.61             0             0             0             0
##    78.11             0             0             0             0
##    78.18             0             0             0             0
```

##	78.27	0	0	0	0
##	78.29	0	0	0	0
##	78.54	0	0	0	0
##	78.85	0	0	0	0
##	79.08	0	0	0	0
##	79.19	0	0	0	0
##	79.42	0	0	0	0
##	79.83	0	0	0	0
##	81.25	0	0	0	0
##	81.72	0	0	0	0
##	81.92	0	0	0	0
##	82.53	0	0	0	0
##	82.57	0	0	0	0
##	82.85	0	0	0	0
##	82.89	0	0	0	0
##	83.51	0	0	0	0
##	85.63	0	0	0	0
##	86.18	0	0	0	0
##	86.34	0	0	0	0
##	86.87	0	0	0	0
##	87.19	0	0	0	0
##	87.21	0	0	0	0
##	87.38	0	0	0	0
##	87.88	0	0	0	0
##	88.05	0	0	0	0
##	88.06	0	0	0	0
##	88.44	0	0	0	0
##	89.75	0	0	0	0
##	89.79	0	0	0	0
##	90.3	0	0	0	0
##	90.96	0	0	0	0
##	91.12	0	0	0	0
##	91.38	0	0	0	0
##	91.43	0	0	0	0
##	92.51	0	0	0	0
##	93.97	0	0	0	0
##	94.15	0	0	0	0
##	94.37	0	0	0	0
##	94.57	0	0	0	0
##	95.5	0	0	0	0
##	96.03	0	0	0	0
##	96.12	0	0	0	0
##	96.73	0	0	0	1
##	97.4	0	0	0	0
##	98.73	0	0	0	0
##	98.78	0	0	0	0
##	102.1	0	0	0	0
##	102.7	0	0	0	0
##	104.1	0	0	0	0
##	105.8	0	0	0	0
##	106.3	0	0	0	0
##	109	0	0	0	0
##	110.1	0	0	0	0
##	111.2	0	0	0	0

```
##    111.8              0            0            0            0
##    113.4              0            0            0            0
##    116                0            0            0            0
##    121.1              0            1            0            0
##    122.8              0            0            0            0
##    123.6              0            0            0            0
##    123.7              0            0            0            0
##    124.4              0            0            0            0
##    124.8              0            0            0            0
##    126.2              0            0            0            0
##    129.5              0            0            0            0
##    131.2              0            0            0            0
##    132.4              0            0            0            0
##    132.9              1            0            0            0
##    133.8              0            0            1            0
##    134.7              0            0            0            0
##    135.7              0            0            0            0
##    137.8              0            0            0            0
##    138.9              0            0            0            0
##    182.1              0            0            0            0
##        svm.pred
## actual  2.09495341577714 2.1268482940321
##    54.42              0            0
##    54.53              0            0
##    59.96              0            0
##    61.24              0            0
##    61.49              0            0
##    62.5               0            0
##    63.19              0            0
##    63.76              0            0
##    64.12              0            0
##    64.55              0            0
##    65.67              0            0
##    65.75              0            0
##    66.2               0            0
##    66.52              0            0
##    66.72              0            0
##    68.51              0            0
##    70.39              0            0
##    71.73              0            0
##    72.49              0            0
##    72.76              0            0
##    73.16              0            0
##    73.34              0            0
##    73.7               0            0
##    73.81              0            0
##    74.2               0            0
##    74.23              0            0
##    74.33              0            0
##    74.65              0            0
##    74.72              0            0
##    75.89              0            0
##    76.1               0            0
##    76.2               0            0
```

```
##   76.31              0              0
##   76.39              0              0
##   76.53              0              0
##   76.83              0              0
##   77.61              0              0
##   78.11              0              0
##   78.18              0              0
##   78.27              0              0
##   78.29              0              0
##   78.54              0              0
##   78.85              0              0
##   79.08              0              0
##   79.19              0              0
##   79.42              0              0
##   79.83              0              0
##   81.25              0              0
##   81.72              0              0
##   81.92              0              0
##   82.53              0              0
##   82.57              0              0
##   82.85              0              0
##   82.89              0              0
##   83.51              0              0
##   85.63              0              0
##   86.18              0              0
##   86.34              0              0
##   86.87              0              0
##   87.19              0              0
##   87.21              0              0
##   87.38              0              0
##   87.88              0              0
##   88.05              0              0
##   88.06              0              0
##   88.44              0              0
##   89.75              0              0
##   89.79              0              0
##   90.3               0              0
##   90.96              0              0
##   91.12              0              0
##   91.38              0              0
##   91.43              0              0
##   92.51              0              0
##   93.97              0              0
##   94.15              0              0
##   94.37              0              0
##   94.57              0              0
##   95.5               0              0
##   96.03              0              0
##   96.12              0              0
##   96.73              0              0
##   97.4               0              0
##   98.73              0              0
##   98.78              0              0
##   102.1              0              0
```

```
## 102.7                0                 0
## 104.1                0                 0
## 105.8                0                 0
## 106.3                0                 0
## 109                  1                 0
## 110.1                0                 0
## 111.2                0                 0
## 111.8                0                 0
## 113.4                0                 0
## 116                  0                 0
## 121.1                0                 0
## 122.8                0                 0
## 123.6                0                 1
## 123.7                0                 0
## 124.4                0                 0
## 124.8                0                 0
## 126.2                0                 0
## 129.5                0                 0
## 131.2                0                 0
## 132.4                0                 0
## 132.9                0                 0
## 133.8                0                 0
## 134.7                0                 0
## 135.7                0                 0
## 137.8                0                 0
## 138.9                0                 0
## 182.1                0                 0
```

```
SVM_wrong<- (test$diagnosis!=svm.pred)
rate<-sum(SVM_wrong)/length(SVM_wrong)
```

Memory Clean up

```
rm(list=ls())
```