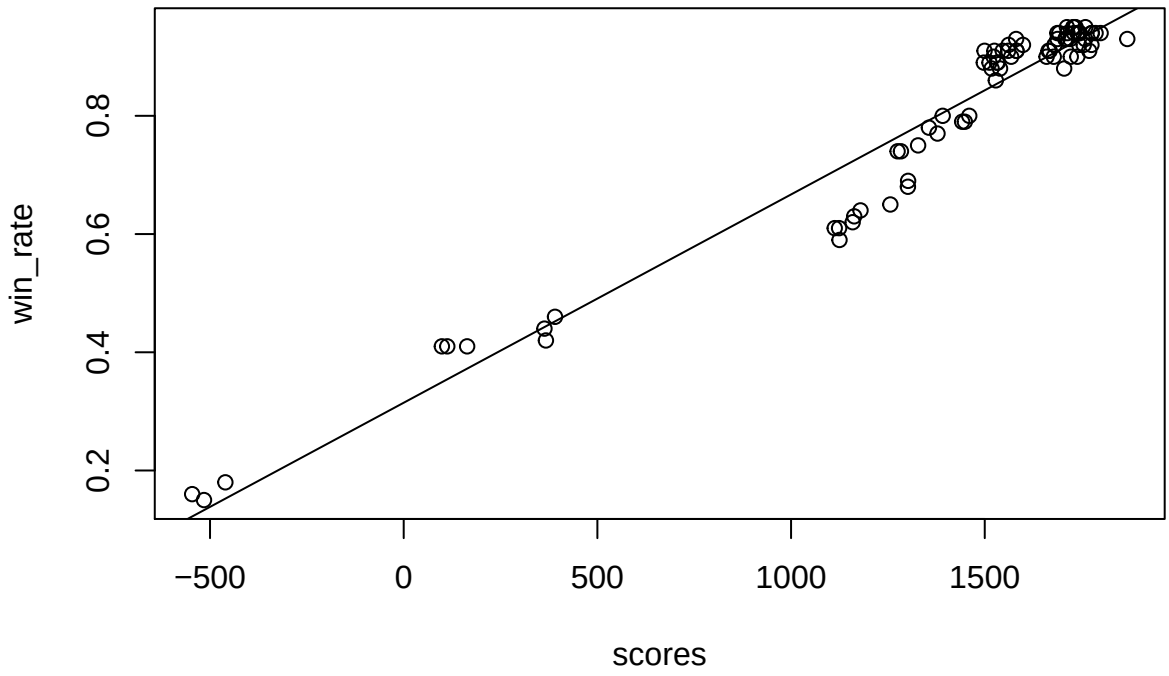
171 Pacman R Analysis

P-values for features

```
## Analysis of Variance Table
##
## Response: win_rate
##             Df  Sum Sq Mean Sq F value    Pr(>F)
## method       2 0.26360 0.13180 12.9036 1.558e-05 ***
## Depth        2 0.05100 0.02550  2.4963    0.0893 .
## feature_val  2 2.04254 1.02127 99.9866 < 2.2e-16 ***
## Residuals   74 0.75584 0.01021
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

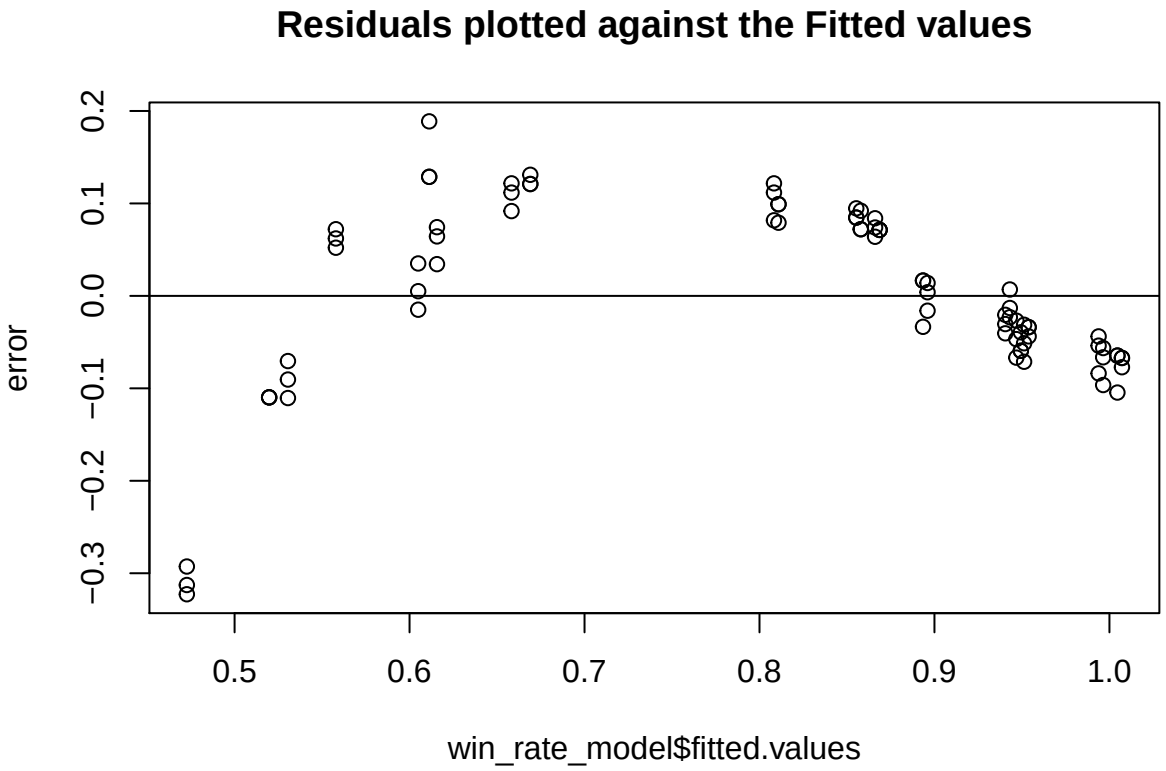
```
## Analysis of Variance Table
##
## Response: scores
##             Df   Sum Sq Mean Sq F value    Pr(>F)
## method       2  3374180 1687090 16.6296 1.085e-06 ***
## Depth        2  1009522  504761  4.9754   0.00939 **
## feature_val  2 11931508 5965754 58.8043 5.155e-16 ***
## Residuals   74  7507371  101451
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

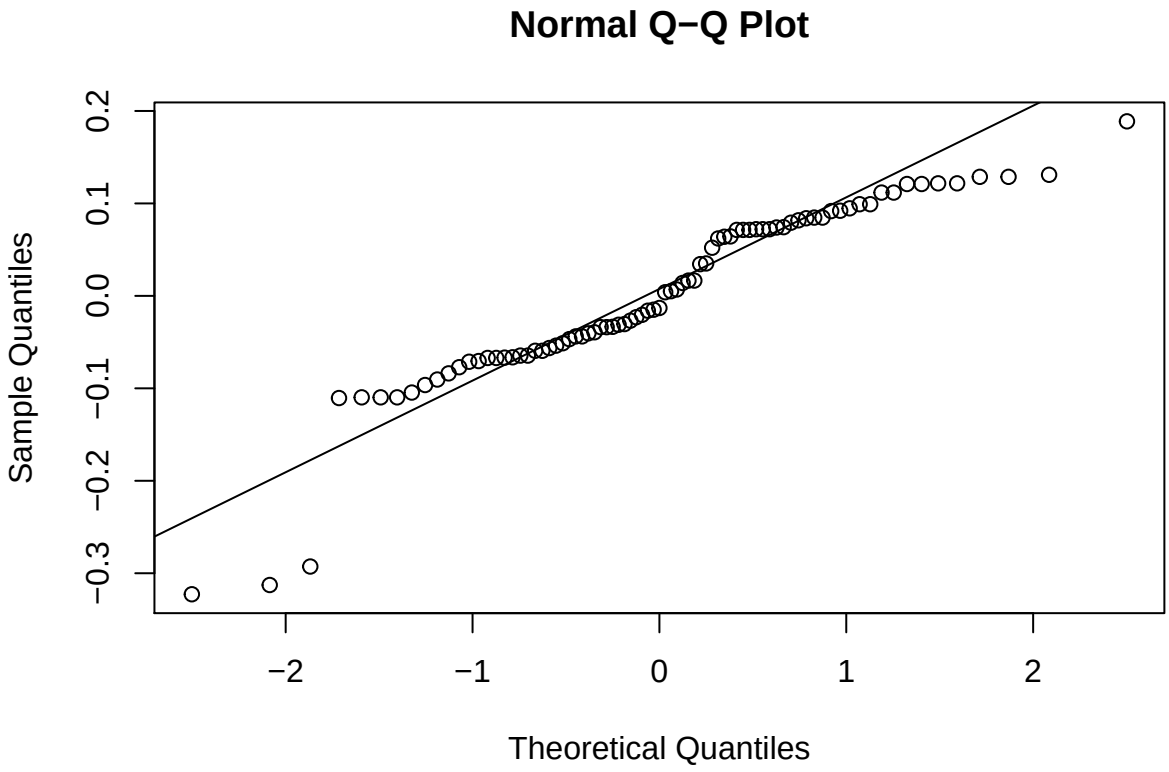



```
##
## Call:
## lm(formula = win_rate ~ scores, data = total)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
```

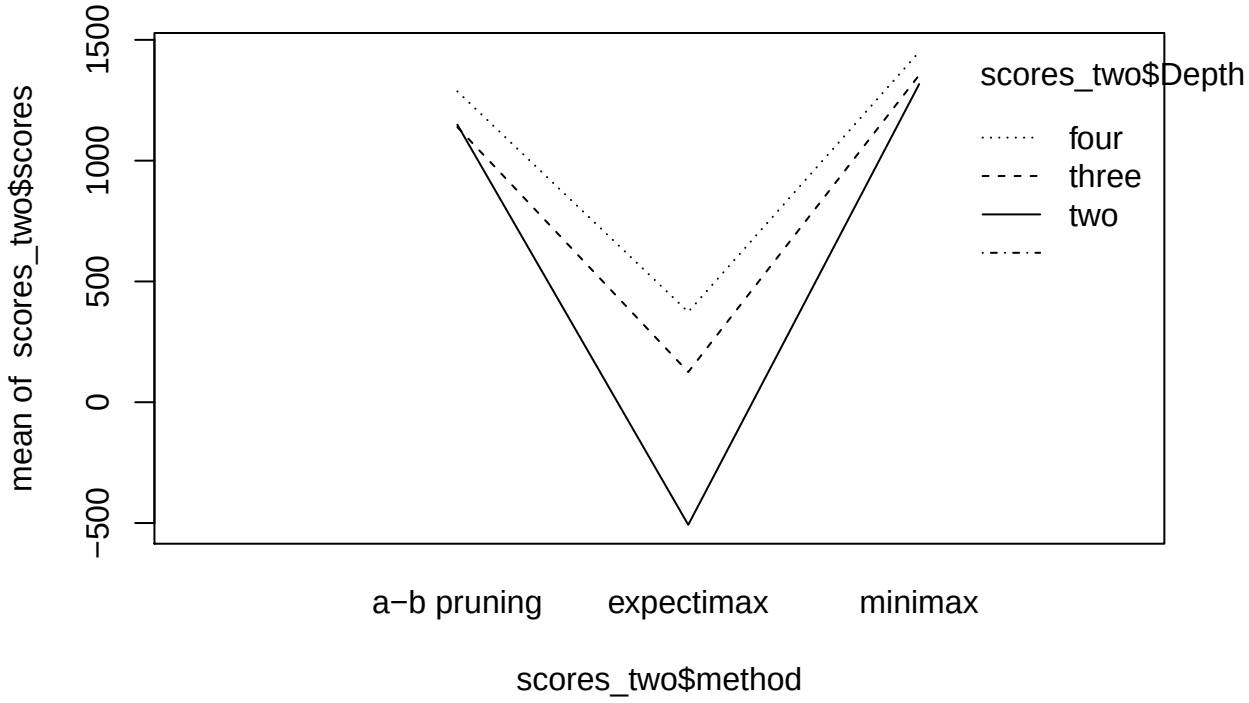
```
## -0.12102 -0.02387  0.01034  0.03081  0.06704
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept) 3.146e-01  1.362e-02   23.11   <2e-16 ***
## scores      3.523e-04  9.088e-06   38.77   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.04436 on 79 degrees of freedom
## Multiple R-squared:  0.9501, Adjusted R-squared:  0.9494
## F-statistic:  1503 on 1 and 79 DF,  p-value: < 2.2e-16
```

Plots to test Anova assumptions

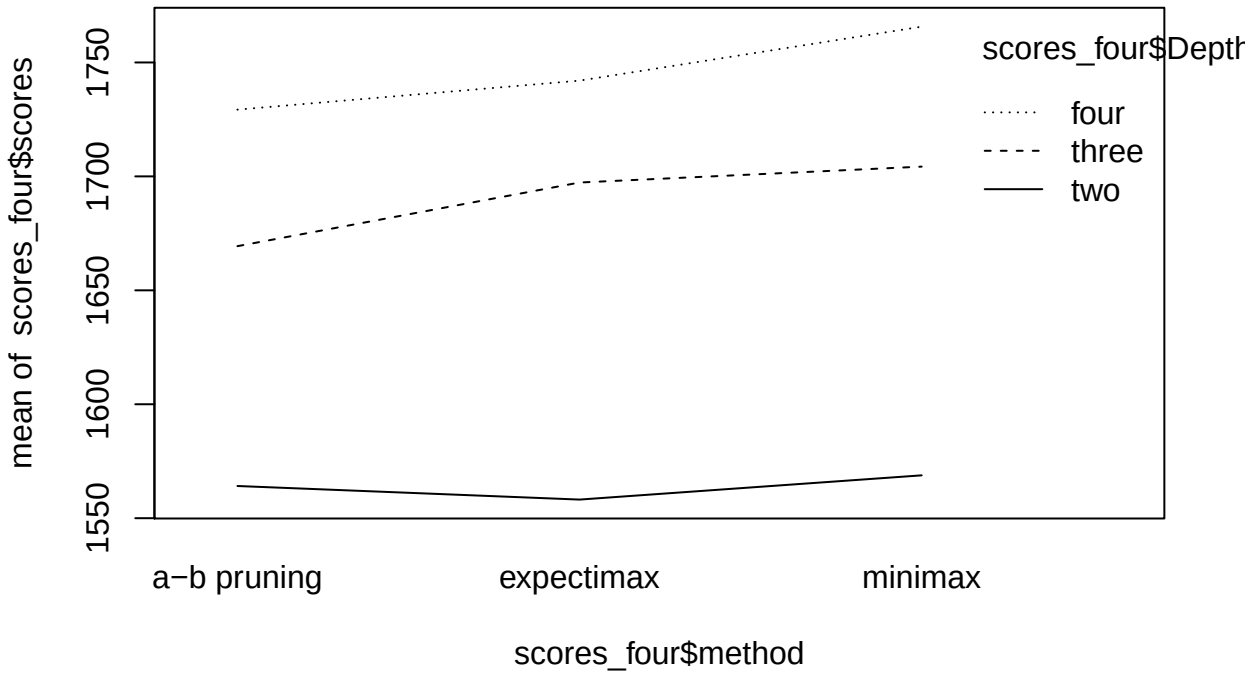




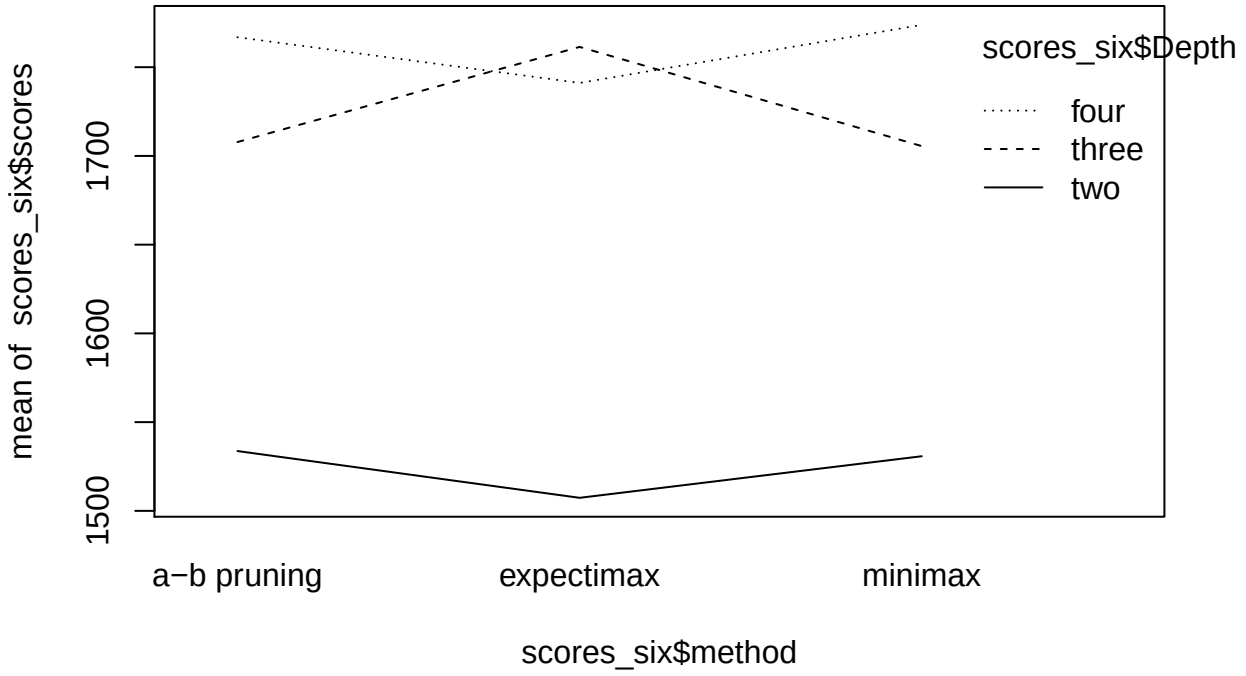
Interaction model of scores when feature_eval is 2



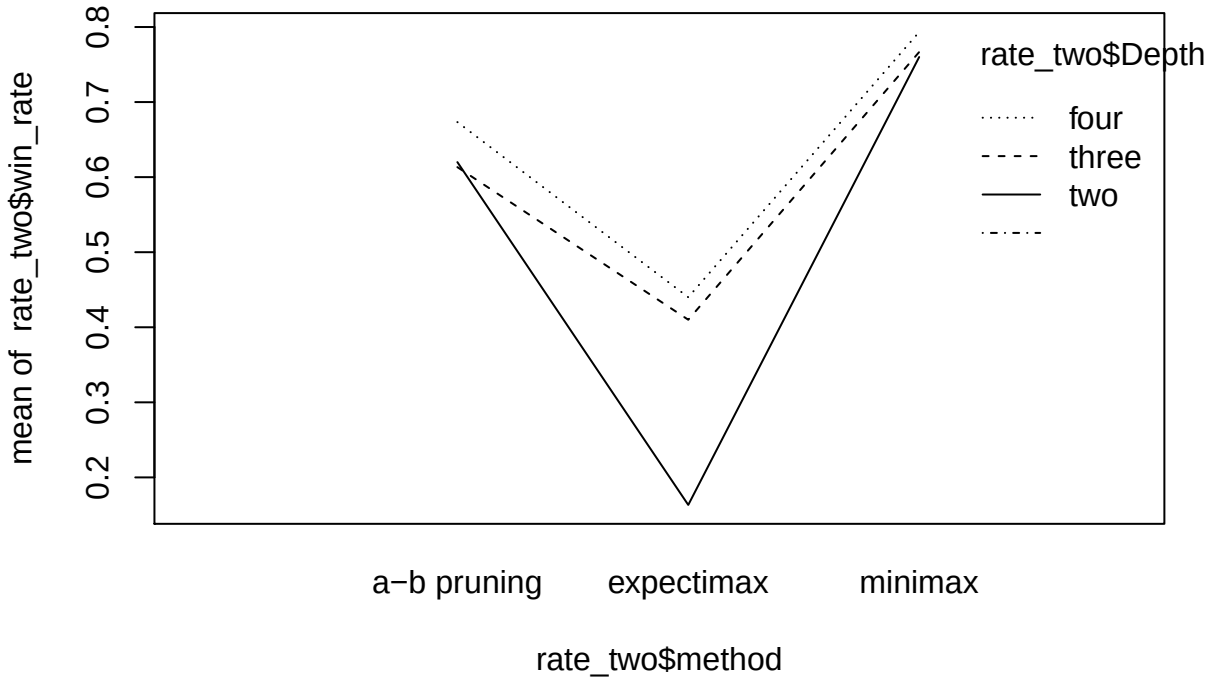
Interaction model of scores when feature_eval is 4



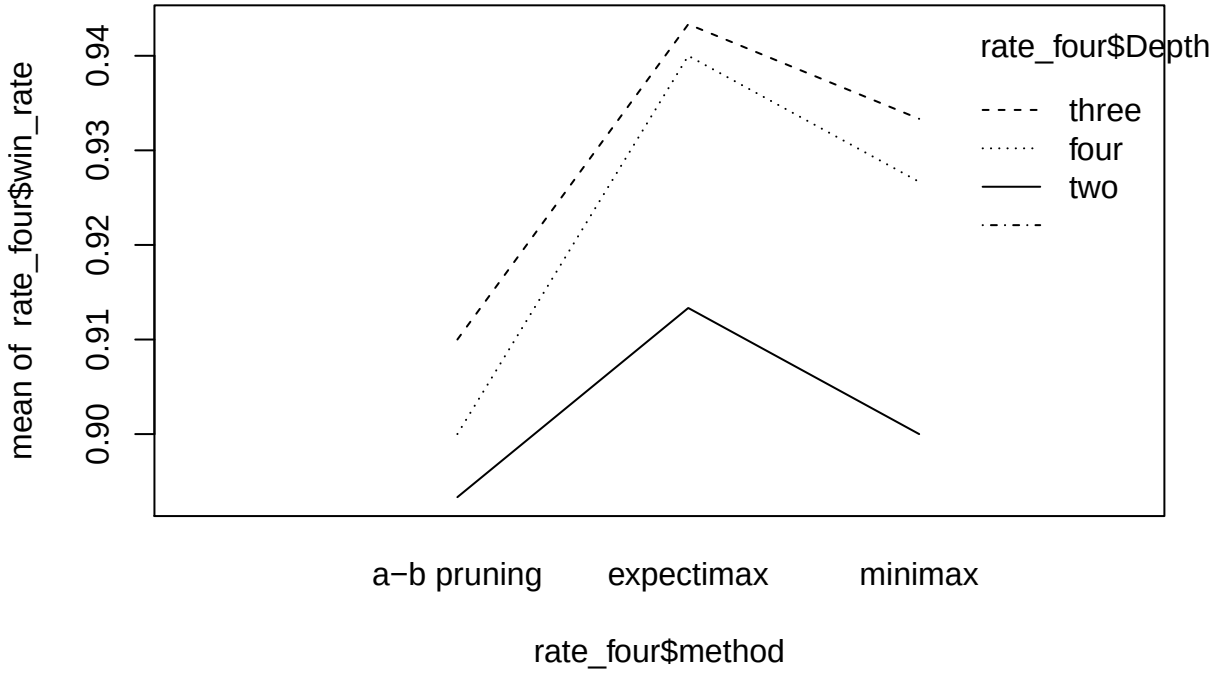
Interaction model of scores when feature_eval is 6



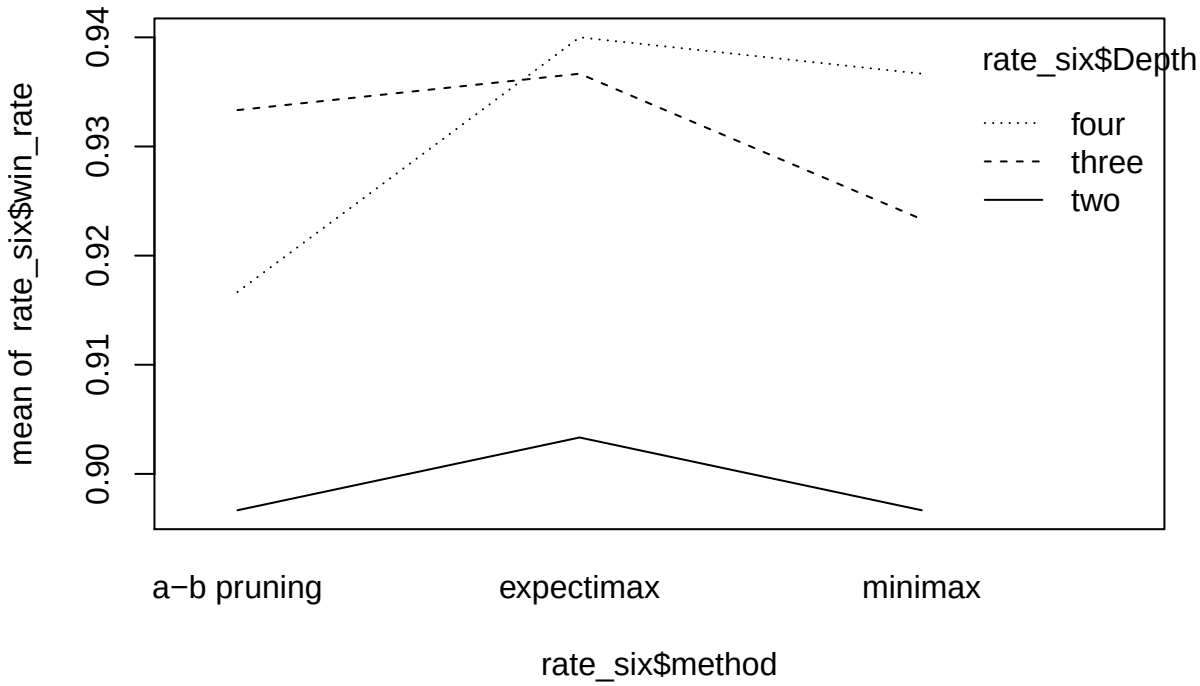
Interaction model of win rate when feature_eval is 2



Interaction model of win rate when feature_eval is 4



Interaction model of win rate when feature_eval is 6


mean of rate_six$win_rate
0.90
0.91
0.92
0.93
0.94
rate_six$Depth
four
three
two
a−b pruning
expectimax
minimax
rate_six$method