Alluvial deposits

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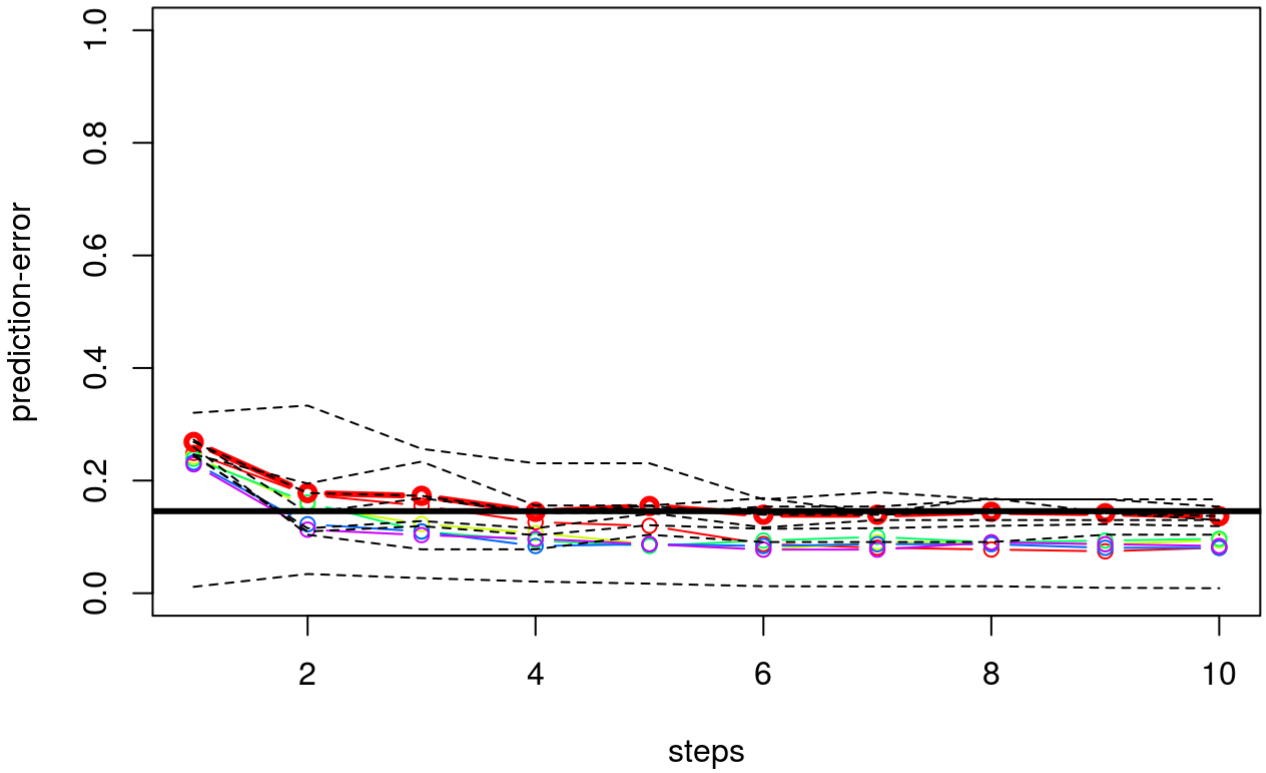
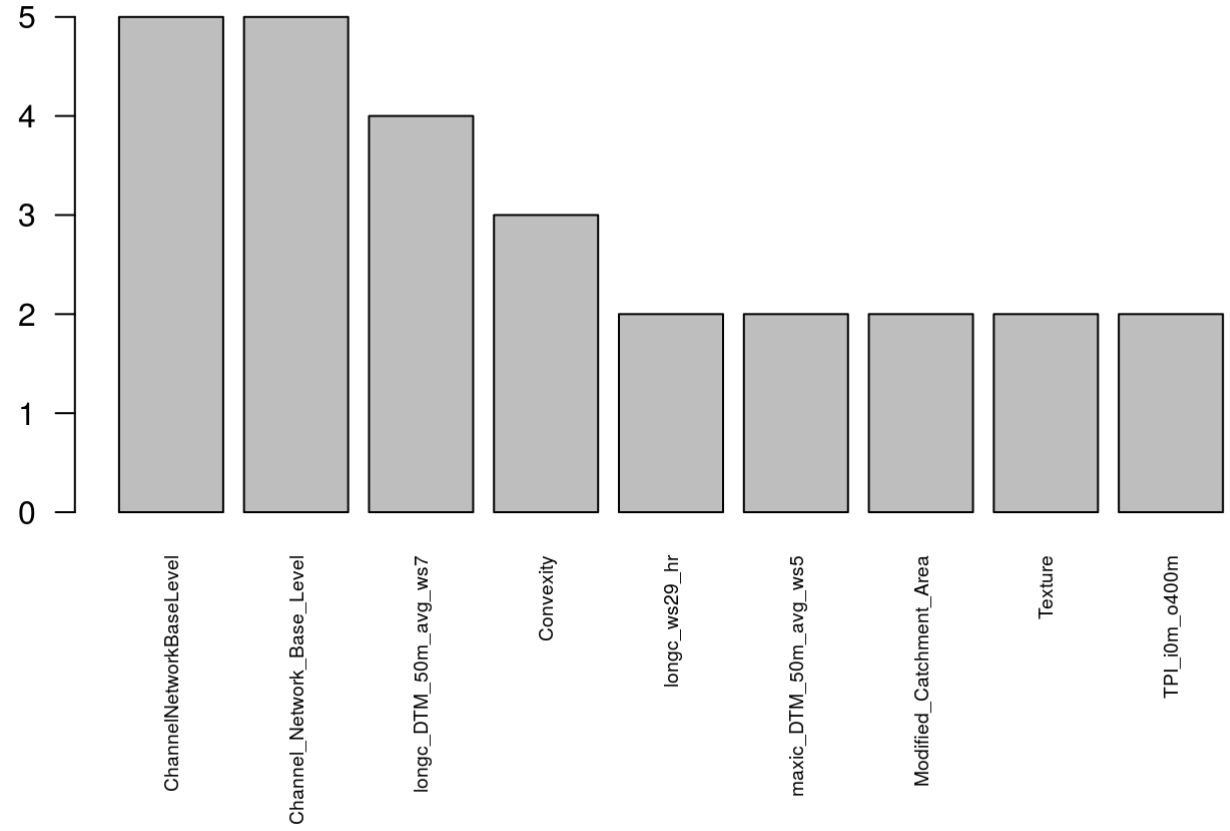
September 12, 2017

Allterraincols

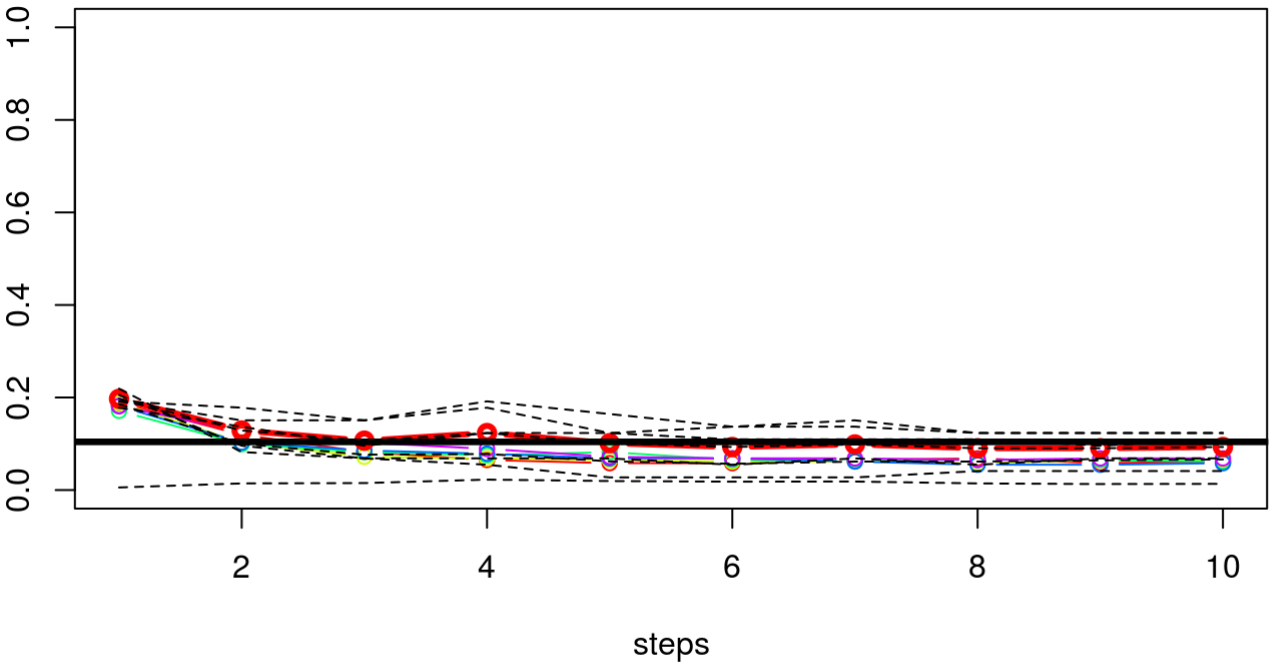
```
## [1] "Alluviale Ablagerung_vs_Kolluvium"
```



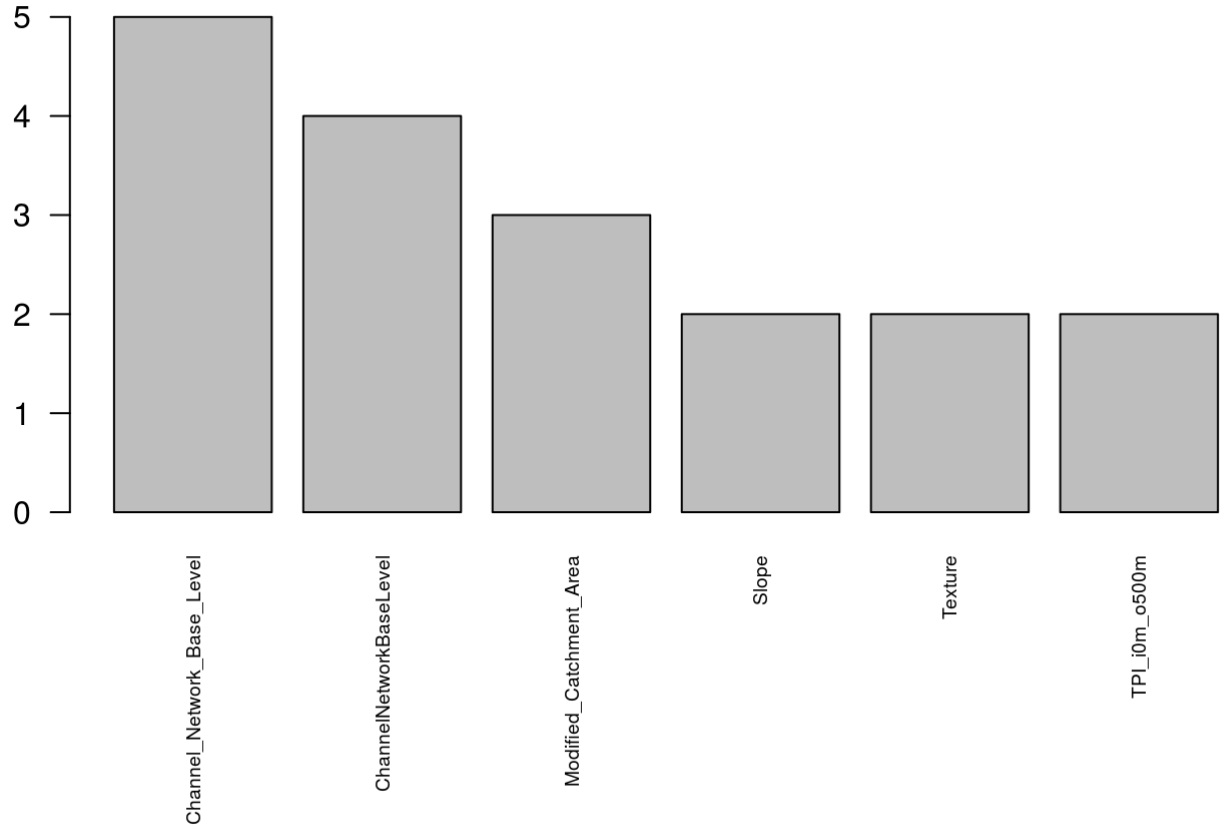
```
##  [1] "Prediction error at end is:  0.268664668664669"
##  [2] "Prediction error at end is:  0.178055278055278"
##  [3] "Prediction error at end is:  0.173026973026973"
##  [4] "Prediction error at end is:  0.144555444555445"
##  [5] "Prediction error at end is:  0.154878454878455"
##  [6] "Prediction error at end is:  0.139427239427239"
##  [7] "Prediction error at end is:  0.139393939393939"
##  [8] "Prediction error at end is:  0.144588744588745"
##  [9] "Prediction error at end is:  0.141991341991342"
## [10] "Prediction error at end is:  0.136829836829837"
##                            k 1                         k 2
## 1       slope_DTM_50m_avg_ws7 Channel_Network_Base_Level
## 2               TPI_i0m_o140m    ChannelNetworkBaseLevel
## 3               TPI_i0m_o500m                    Texture
## 4                   Convexity      longc_DTM_50m_avg_ws7
## 5  Channel_Network_Base_Level      maxic_DTM_50m_avg_ws5
## 6     ChannelNetworkBaseLevel               TPI_i0m_o40m
## 7               TPI_i0m_o300m      slope_DTM_50m_avg_ws3
## 8                minic_ws5_hr              TPI_i0m_o400m
## 9               longc_ws29_hr           MaximalCurvature
## 10              TPI_i0m_o400m                  minic_ws5
##                                k 3                            k 4
## 1        Channel_Network_Base_Level    Channel_Network_Base_Level
## 2           ChannelNetworkBaseLevel       ChannelNetworkBaseLevel
## 3             longc_DTM_50m_avg_ws7       Modified_Catchment_Area
## 4  VerticalDistancetoChannelNetwork                   planc_ws15
## 5                    longc_ws29_hr                TPI_i0m_o130m
## 6                   Total_Curvature         longc_DTM_50m_avg_ws7
## 7         Topographic_Wetness_Index sagaTopographic_Wetness_Index
## 8             profc_DTM_50m_avg_ws3                     Convexity
## 9                         longc_ws15         maxic_DTM_50m_avg_ws3
## 10          Modified_Catchment_Area         planc_DTM_50m_avg_ws7
##                            k 5
## 1  Channel_Network_Base_Level
## 2     ChannelNetworkBaseLevel
## 3                     Texture
## 4                   Convexity
## 5       longc_DTM_50m_avg_ws7
## 6                   longc_ws7
## 7       maxic_DTM_50m_avg_ws5
## 8                    MRRTF_hr
## 9       RelativeSlopePosition
## 10              slope_ws15_hr
```



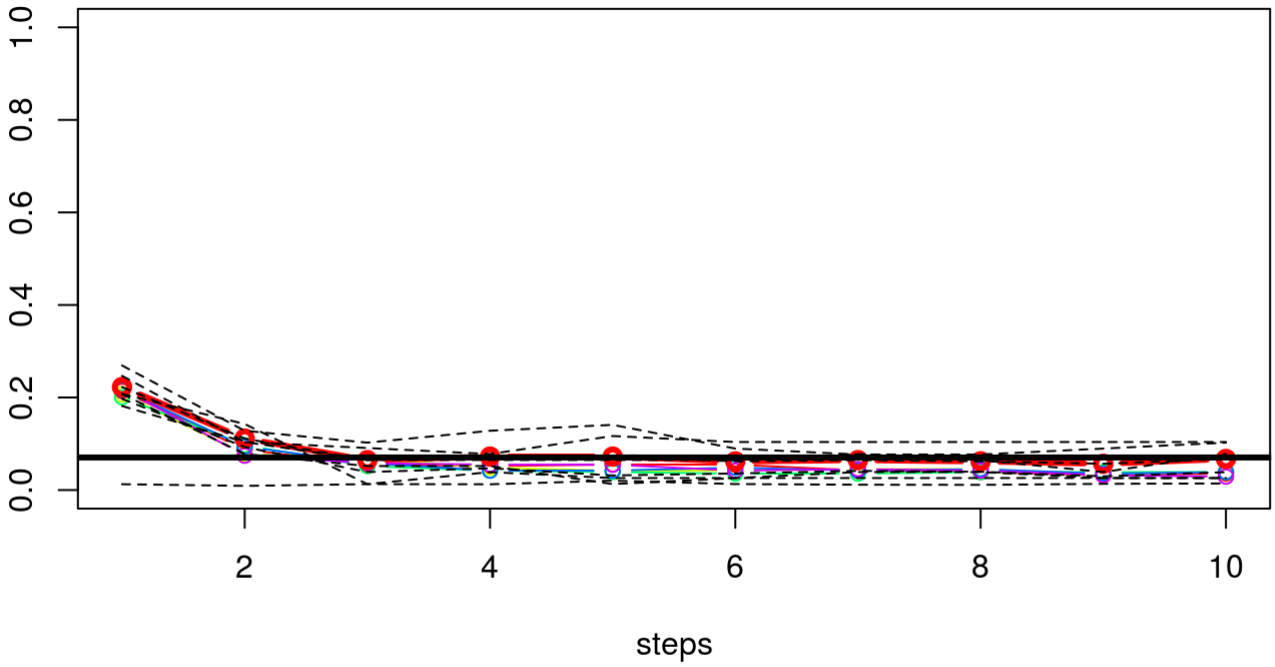

```
## [1] "Alluviale Ablagerung_vs_Moorablagerung"
```



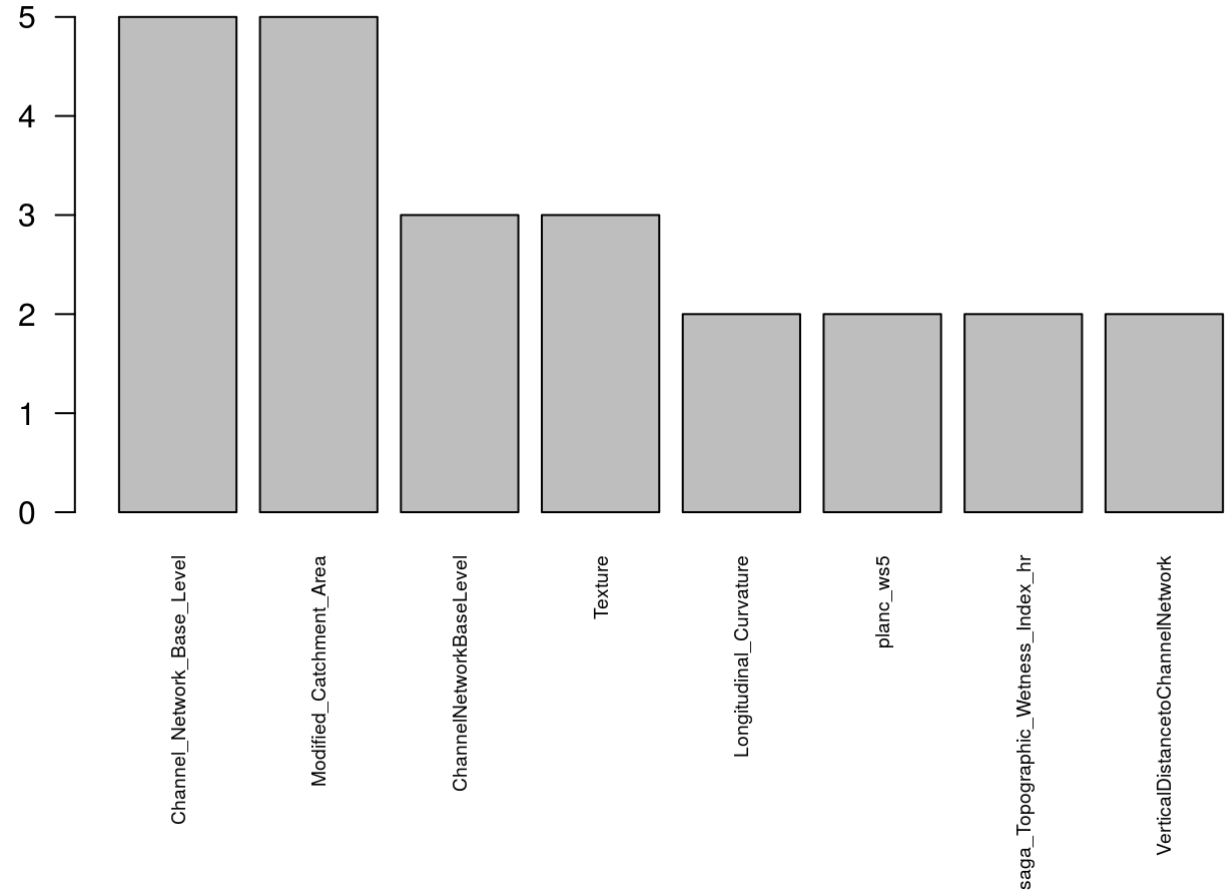
```
##  [1] "Prediction error at end is:  0.197260273972603"
##  [2] "Prediction error at end is:  0.128767123287671"
##  [3] "Prediction error at end is:  0.106849315068493"
##  [4] "Prediction error at end is:  0.123287671232877"
##  [5] "Prediction error at end is:  0.101369863013699"
##  [6] "Prediction error at end is:  0.0931506849315068"
##  [7] "Prediction error at end is:  0.0986301369863014"
##  [8] "Prediction error at end is:  0.0904109589041096"
##  [9] "Prediction error at end is:  0.0904109589041096"
## [10] "Prediction error at end is:  0.0931506849315068"
##                            k 1                          k 2
## 1     ChannelNetworkBaseLevel    ChannelNetworkBaseLevel
## 2     Modified_Catchment_Area              TPI_i0m_o500m
## 3       minic_DTM_50m_avg_ws7                      Slope
## 4                   slope_ws11              minic_ws13_hr
## 5                slope_ws23_hr                    Texture
## 6                longc_ws13_hr   Mass_Balance_Index_hr_hr
## 7                    slope_ws5          Minimal_Curvature
## 8  Channel_Network_Base_Level Channel_Network_Base_Level
## 9           Mass_Balance_Index                  crosc_ws5
## 10            ConvergenceIndex                  minic_ws3
##                            k 3                          k 4
## 1     ChannelNetworkBaseLevel Channel_Network_Base_Level
## 2  Channel_Network_Base_Level              TPI_i0m_o500m
## 3       longc_DTM_50m_avg_ws7                  LS_Factor
## 4                   planc_ws15            Catchment_slope
## 5                      Texture              slope_ws29_hr
## 6                    MRVBF_hr      slope_DTM_50m_avg_ws7
## 7       slope_DTM_50m_avg_ws5    Modified_Catchment_Area
## 8                maxic_ws23_hr                 planc_ws11
## 9                        Slope      crosc_DTM_50m_avg_ws3
## 10      planc_DTM_50m_avg_ws3              TotalCurvature
##                                k 5
## 1           ChannelNetworkBaseLevel
## 2        Channel_Network_Base_Level
## 3     sagaTopographic_Wetness_Index
## 4  VerticalDistancetoChannelNetwork
## 5           Modified_Catchment_Area
## 6                         crosc_ws3
## 7                     minic_ws15_hr
## 8                     minic_ws23_hr
## 9                      crosc_ws3_hr
## 10                  Catchment_area
```



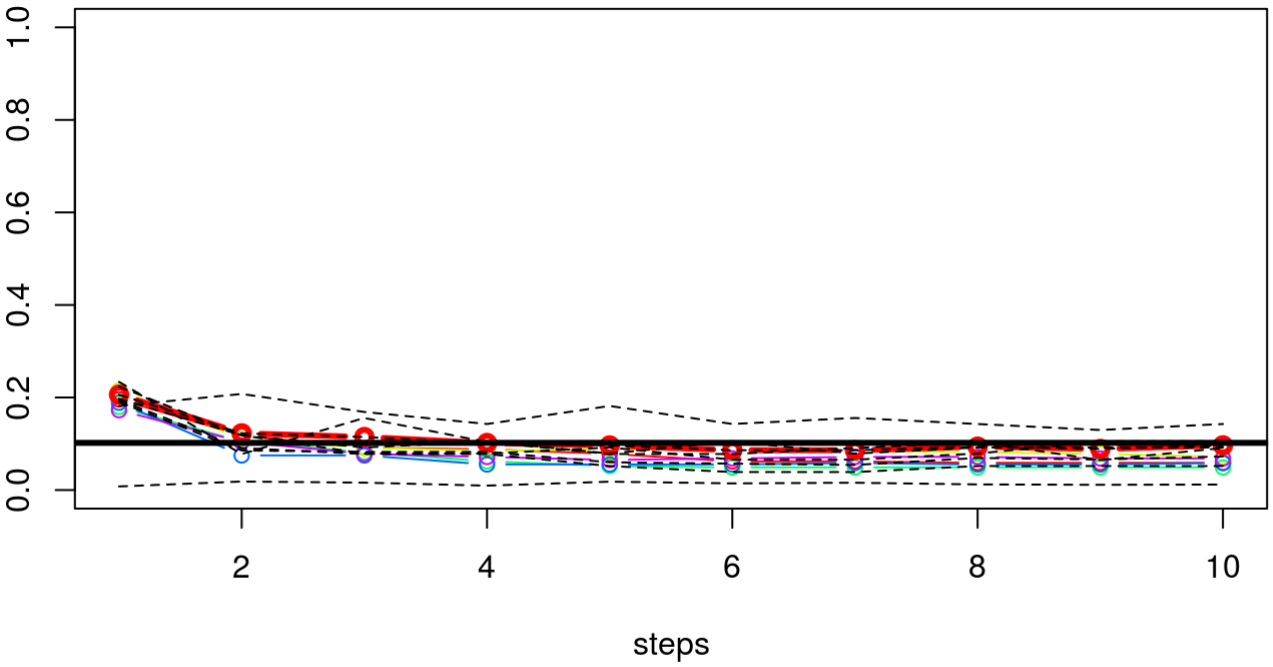

```
## [1] "Alluviale Ablagerung_vs_Glaziolakustrine Ablagerung"
```



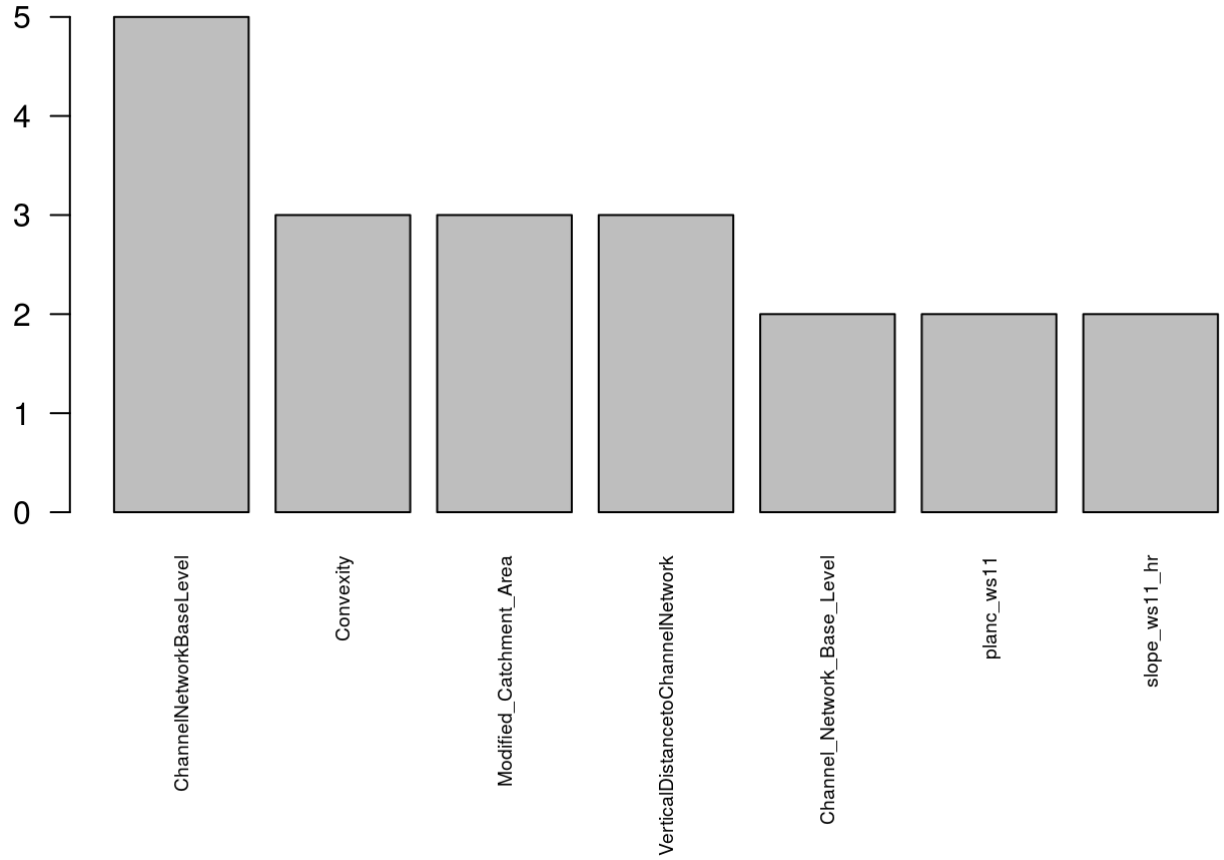
```
##  [1] "Prediction error at end is:  0.222677322677323"
##  [2] "Prediction error at end is:  0.111355311355311"
##  [3] "Prediction error at end is:  0.0646686646686647"
##  [4] "Prediction error at end is:  0.0723942723942724"
##  [5] "Prediction error at end is:  0.0723609723609724"
##  [6] "Prediction error at end is:  0.0621045621045621"
##  [7] "Prediction error at end is:  0.0647352647352647"
##  [8] "Prediction error at end is:  0.0621378621378621"
##  [9] "Prediction error at end is:  0.0569097569097569"
## [10] "Prediction error at end is:  0.0672660672660673"
##                            k 1                                k 2
## 1  Channel_Network_Base_Level        Channel_Network_Base_Level
## 2     Modified_Catchment_Area                           Texture
## 3       minic_DTM_50m_avg_ws5           Modified_Catchment_Area
## 4                  minic_ws11             profc_DTM_50m_avg_ws5
## 5                    MRRTF_hr             crosc_DTM_50m_avg_ws7
## 6                     Texture                         planc_ws5
## 7       minic_DTM_50m_avg_ws7                      TPI_i0m_o50m
## 8       longc_DTM_50m_avg_ws5           ChannelNetworkBaseLevel
## 9               longc_ws11_hr                               TWI
## 10      planc_DTM_50m_avg_ws7 saga_Topographic_Wetness_Index_hr
##                                k 3                                k 4
## 1        Channel_Network_Base_Level  VerticalDistancetoChannelNetwork
## 2           Modified_Catchment_Area        Channel_Network_Base_Level
## 3  VerticalDistancetoChannelNetwork           Modified_Catchment_Area
## 4                          Convexity saga_Topographic_Wetness_Index_hr
## 5                     slope_ws19_hr           ChannelNetworkBaseLevel
## 6                     minic_ws29_hr                         planc_ws15
## 7                         planc_ws5            Longitudinal_Curvature
## 8                      longc_ws9_hr               Flow_Line_Curvature
## 9           CrossSectionalCurvature                     minic_ws13_hr
## 10                     crosc_ws9_hr                Catchment_slope_hr
##                            k 5
## 1  Channel_Network_Base_Level
## 2     Modified_Catchment_Area
## 3       longc_DTM_50m_avg_ws7
## 4                  minic_ws15
## 5                     Texture
## 6     TopographicWetnessIndex
## 7      Longitudinal_Curvature
## 8     ChannelNetworkBaseLevel
## 9               Catchment_area
## 10              TPI_i0m_o500m
```



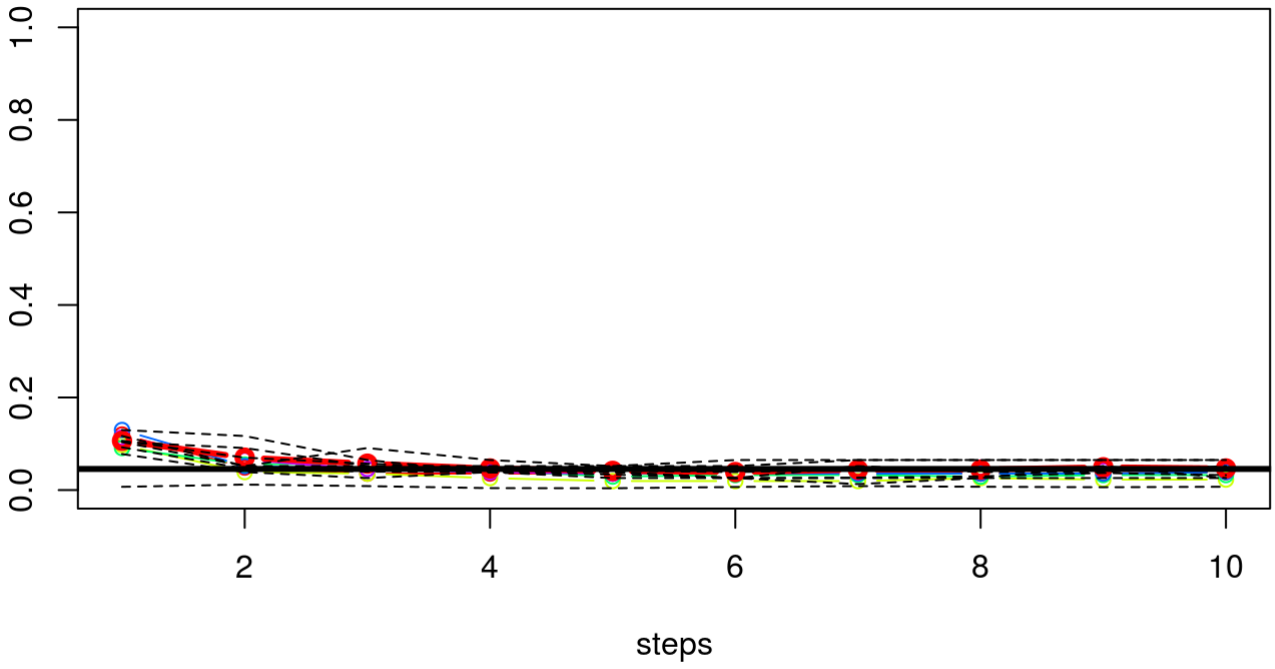

```
## [1] "Alluviale Ablagerung_vs_Grundmoraene"
```



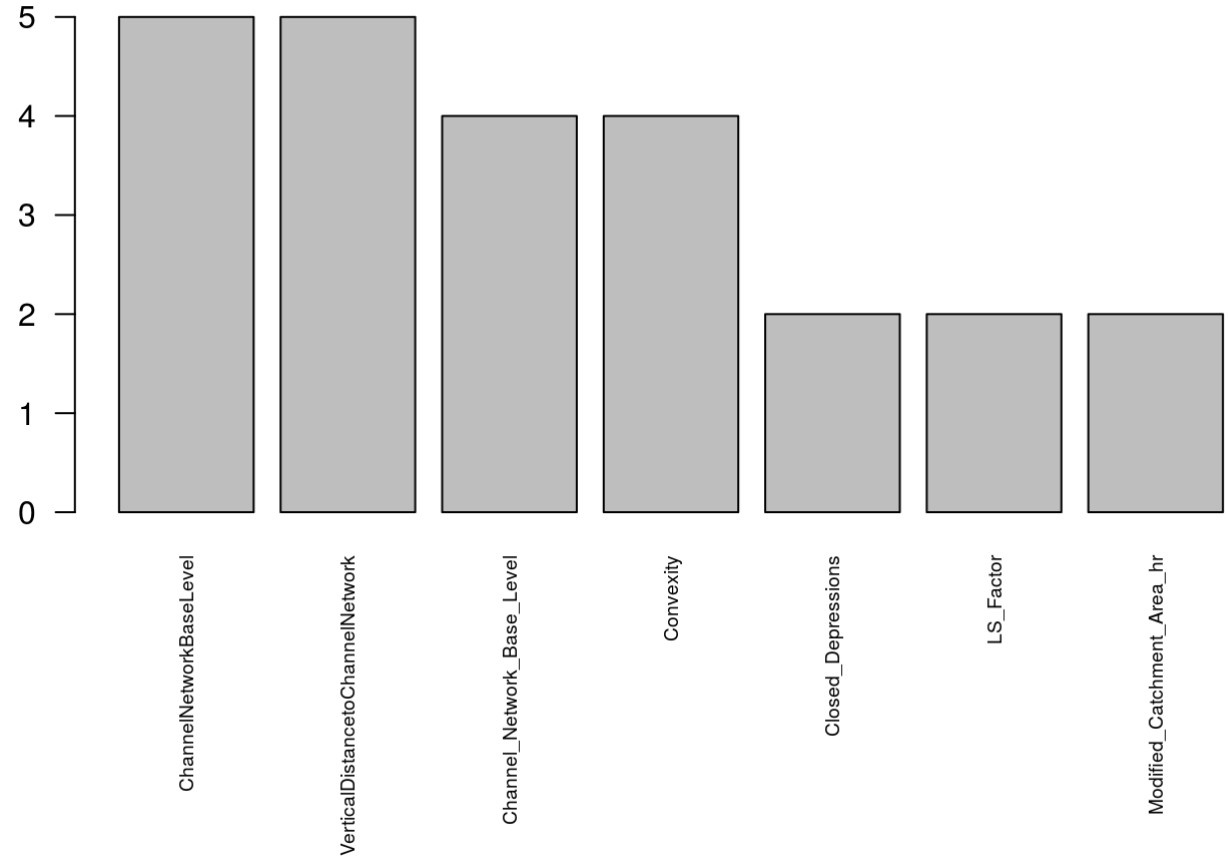
```
##  [1] "Prediction error at end is:  0.206288448393712"
##  [2] "Prediction error at end is:  0.122693096377307"
##  [3] "Prediction error at end is:  0.11473000683527"
##  [4] "Prediction error at end is:  0.101777170198223"
##  [5] "Prediction error at end is:  0.0965481886534518"
##  [6] "Prediction error at end is:  0.0861585782638414"
##  [7] "Prediction error at end is:  0.0860902255639098"
##  [8] "Prediction error at end is:  0.0939507860560492"
##  [9] "Prediction error at end is:  0.0888243335611757"
## [10] "Prediction error at end is:  0.0966165413533835"
##                         k 1                              k 2
## 1  Modified_Catchment_Area          ChannelNetworkBaseLevel
## 2  ChannelNetworkBaseLevel VerticalDistancetoChannelNetwork
## 3    minic_DTM_50m_avg_ws7                Convergence_Index
## 4                Convexity                     crosc_ws7_hr
## 5                planc_ws7                        Convexity
## 6                slope_ws3       Modified_Catchment_Area_hr
## 7                minic_ws5                      longc_ws7_hr
## 8            crosc_ws23_hr                       crosc_ws15
## 9            slope_ws11_hr        Topographic_Wetness_Index
## 10           maxic_ws29_hr                      TPI_i0m_o50m
##                                k 3                          k 4
## 1           Modified_Catchment_Area    ChannelNetworkBaseLevel
## 2                     slope_ws23_hr Channel_Network_Base_Level
## 3  VerticalDistancetoChannelNetwork             Catchment_Area2
## 4           ChannelNetworkBaseLevel                  planc_ws11
## 5                     slope_ws29_hr          Minimal_Curvature
## 6                        planc_ws11             Plan_Curvature
## 7                       slope_ws7_hr                  planc_ws15
## 8             crosc_DTM_50m_avg_ws3          Profile_Curvature
## 9                     slope_ws11_hr              planc_ws29_hr
## 10                        slope_ws5              PlanCurvature
##                                k 5
## 1           ChannelNetworkBaseLevel
## 2           Modified_Catchment_Area
## 3        Channel_Network_Base_Level
## 4  VerticalDistancetoChannelNetwork
## 5                     profc_ws29_hr
## 6                        slope_ws11
## 7             longc_DTM_50m_avg_ws5
## 8                        Convexity
## 9                       longc_ws15
## 10                       LS_Factor
```



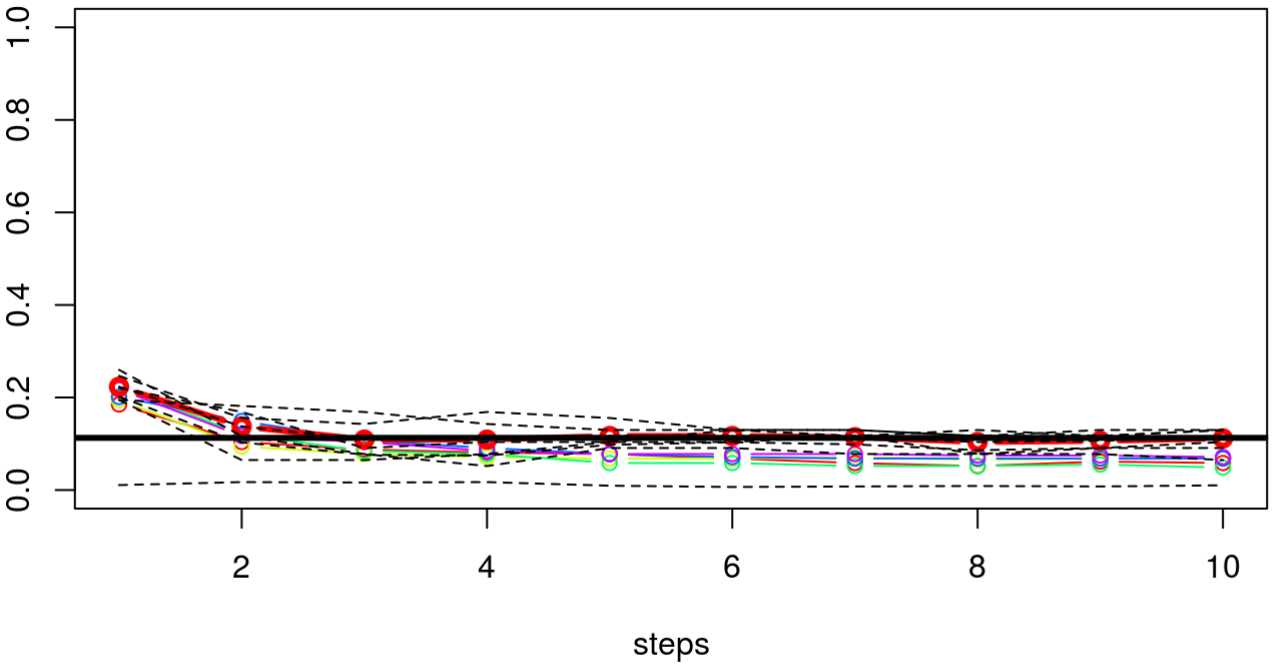

```
## [1] "Alluviale Ablagerung_vs_Moraene undifferenziert"
```



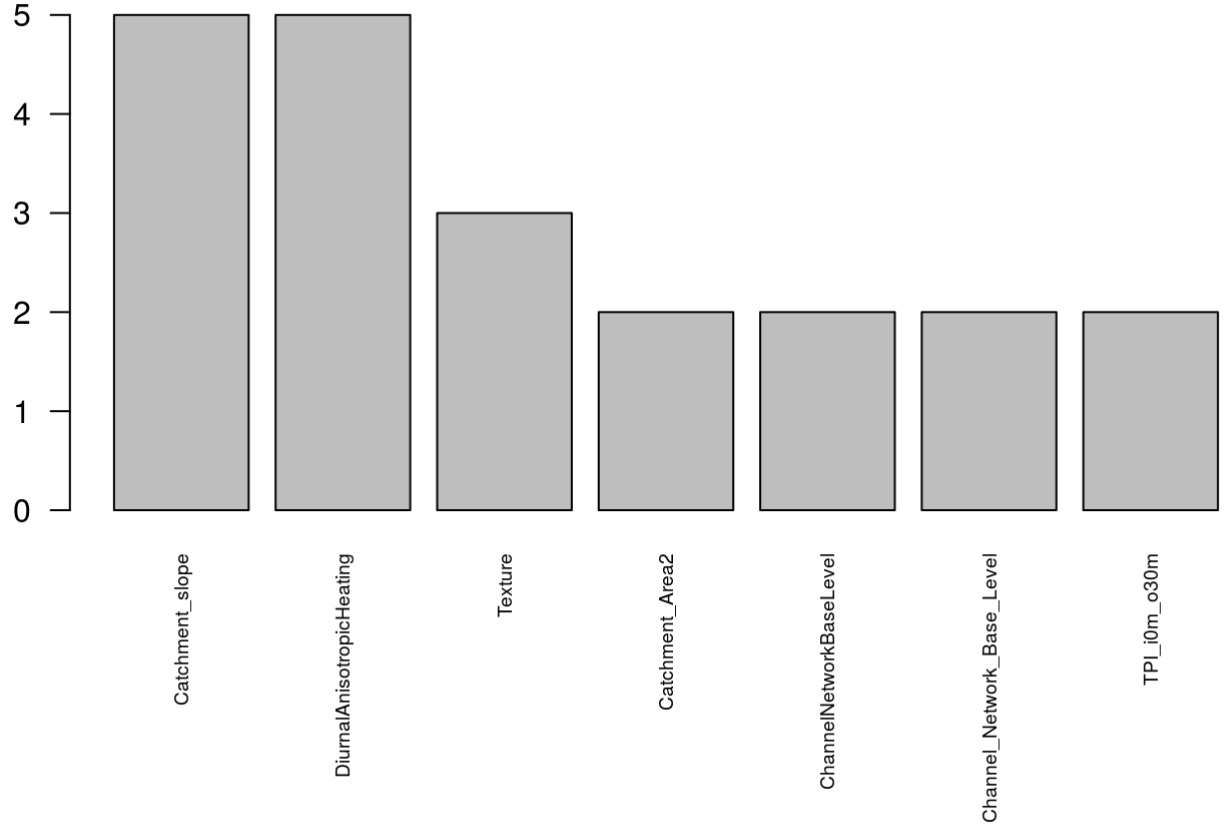
```
##  [1] "Prediction error at end is:  0.106493506493506"
##  [2] "Prediction error at end is:  0.0701298701298701"
##  [3] "Prediction error at end is:  0.0571428571428571"
##  [4] "Prediction error at end is:  0.0467532467532468"
##  [5] "Prediction error at end is:  0.0415584415584416"
##  [6] "Prediction error at end is:  0.038961038961039"
##  [7] "Prediction error at end is:  0.0441558441558442"
##  [8] "Prediction error at end is:  0.0441558441558442"
##  [9] "Prediction error at end is:  0.0493506493506493"
## [10] "Prediction error at end is:  0.0467532467532468"
##                                 k 1                                 k 2
## 1           ChannelNetworkBaseLevel          ChannelNetworkBaseLevel
## 2  VerticalDistancetoChannelNetwork       Channel_Network_Base_Level
## 3        Channel_Network_Base_Level VerticalDistancetoChannelNetwork
## 4         DiurnalAnisotropicHeating                         Convexity
## 5                     TPI_i0m_o120m            minic_DTM_50m_avg_ws7
## 6                     slope_ws13_hr                         longc_ws5
## 7                        minic_ws11       Modified_Catchment_Area_hr
## 8                     profc_ws23_hr                           Texture
## 9                        minic_ws15                       planc_ws11
## 10                       profc_ws15                    crosc_ws15_hr
##                                 k 3                                 k 4
## 1           ChannelNetworkBaseLevel          ChannelNetworkBaseLevel
## 2                         LS_Factor       Channel_Network_Base_Level
## 3  VerticalDistancetoChannelNetwork VerticalDistancetoChannelNetwork
## 4                         Convexity                         Convexity
## 5                Closed_Depressions                    crosc_ws13_hr
## 6        Channel_Network_Base_Level                   Catchment_area
## 7             profc_DTM_50m_avg_ws5                         LS_Factor
## 8                     TPI_i0m_o110m               Closed_Depressions
## 9                      longc_ws7_hr                    planc_ws13_hr
## 10                  Catchment_Area2                    planc_ws29_hr
##                                 k 5
## 1           ChannelNetworkBaseLevel
## 2  VerticalDistancetoChannelNetwork
## 3                     maxic_ws9_hr
## 4                        Convexity
## 5                     planc_ws9_hr
## 6                       planc_ws15
## 7        Modified_Catchment_Area_hr
## 8          Mass_Balance_Index_hr_hr
## 9                 ConvergenceIndex
## 10                ProfileCurvature
```




```
## [1] "Alluviale Ablagerung_vs_gemischte Kegel"
```

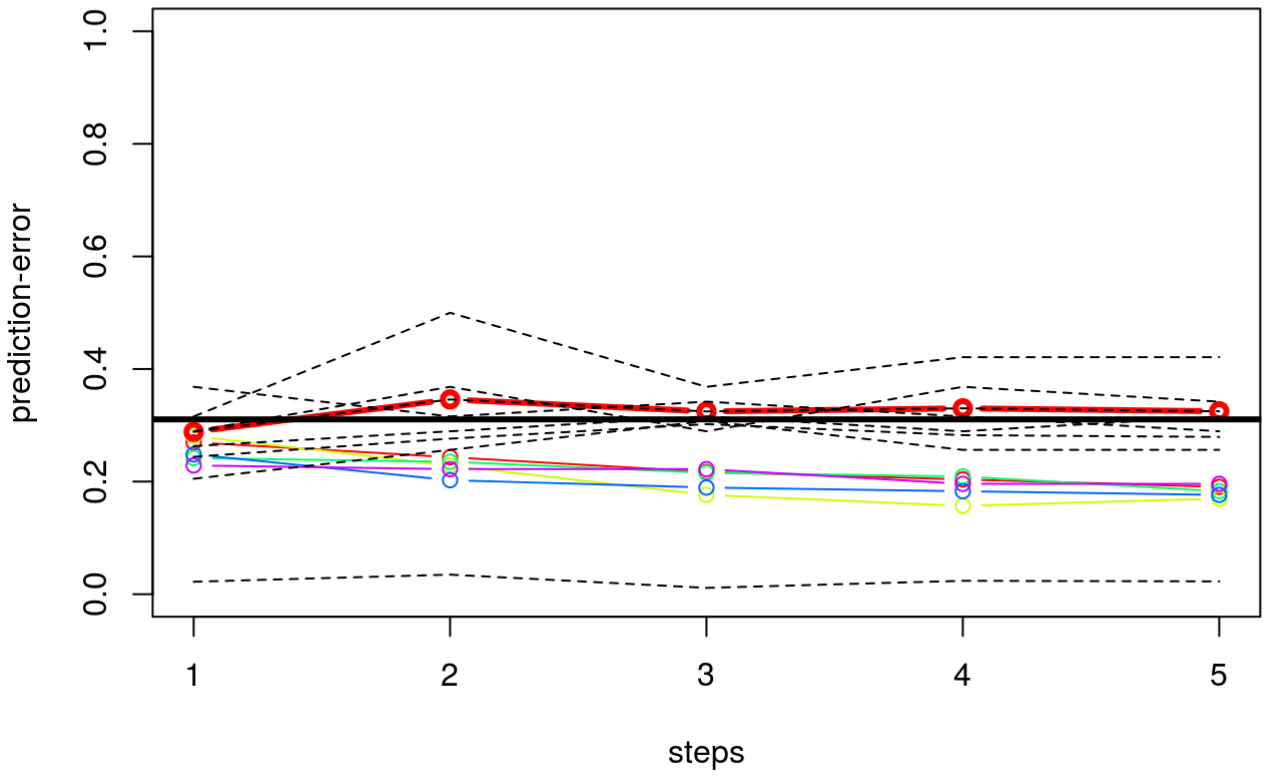


```
##  [1] "Prediction error at end is:  0.223376623376623"
##  [2] "Prediction error at end is:  0.137662337662338"
##  [3] "Prediction error at end is:  0.109090909090909"
##  [4] "Prediction error at end is:  0.109090909090909"
##  [5] "Prediction error at end is:  0.116883116883117"
##  [6] "Prediction error at end is:  0.116883116883117"
##  [7] "Prediction error at end is:  0.114285714285714"
##  [8] "Prediction error at end is:  0.103896103896104"
##  [9] "Prediction error at end is:  0.106493506493506"
## [10] "Prediction error at end is:  0.111688311688312"
##                           k 1                       k 2
## 1            Catchment_slope           Catchment_slope
## 2            Catchment_Area2 DiurnalAnisotropicHeating
## 3               slope_ws7_hr     profc_DTM_50m_avg_ws3
## 4    ChannelNetworkBaseLevel                   Texture
## 5               TPI_i0m_o500m     planc_DTM_50m_avg_ws5
## 6  DiurnalAnisotropicHeating   TopographicWetnessIndex
## 7      planc_DTM_50m_avg_ws7           Total_Curvature
## 8      minic_DTM_50m_avg_ws3             TPI_i0m_o250m
## 9               TPI_i0m_o30m     crosc_DTM_50m_avg_ws7
## 10                longc_ws11     longc_DTM_50m_avg_ws3
##                                 k 3                          k 4
## 1                  Catchment_slope                      Texture
## 2         DiurnalAnisotropicHeating            Catchment_slope
## 3         Topographic_Wetness_Index Channel_Network_Base_Level
## 4                           Texture  DiurnalAnisotropicHeating
## 5           ChannelNetworkBaseLevel             Catchment_area
## 6                          profc_ws3    Modified_Catchment_Area
## 7  VerticalDistancetoChannelNetwork Modified_Catchment_Area_hr
## 8                     maxic_ws13_hr                   MRVBF_hr
## 9                     profc_ws23_hr              TPI_i0m_o400m
## 10            profc_DTM_50m_avg_ws5      longc_DTM_50m_avg_ws5
##                           k 5
## 1            Catchment_slope
## 2              slope_ws23_hr
## 3            Catchment_Area2
## 4   DiurnalAnisotropicHeating
## 5                TPI_i0m_o30m
## 6               planc_ws19_hr
## 7       longc_DTM_50m_avg_ws7
## 8                 planc_ws5_hr
## 9  Channel_Network_Base_Level
## 10           MinimalCurvature
```

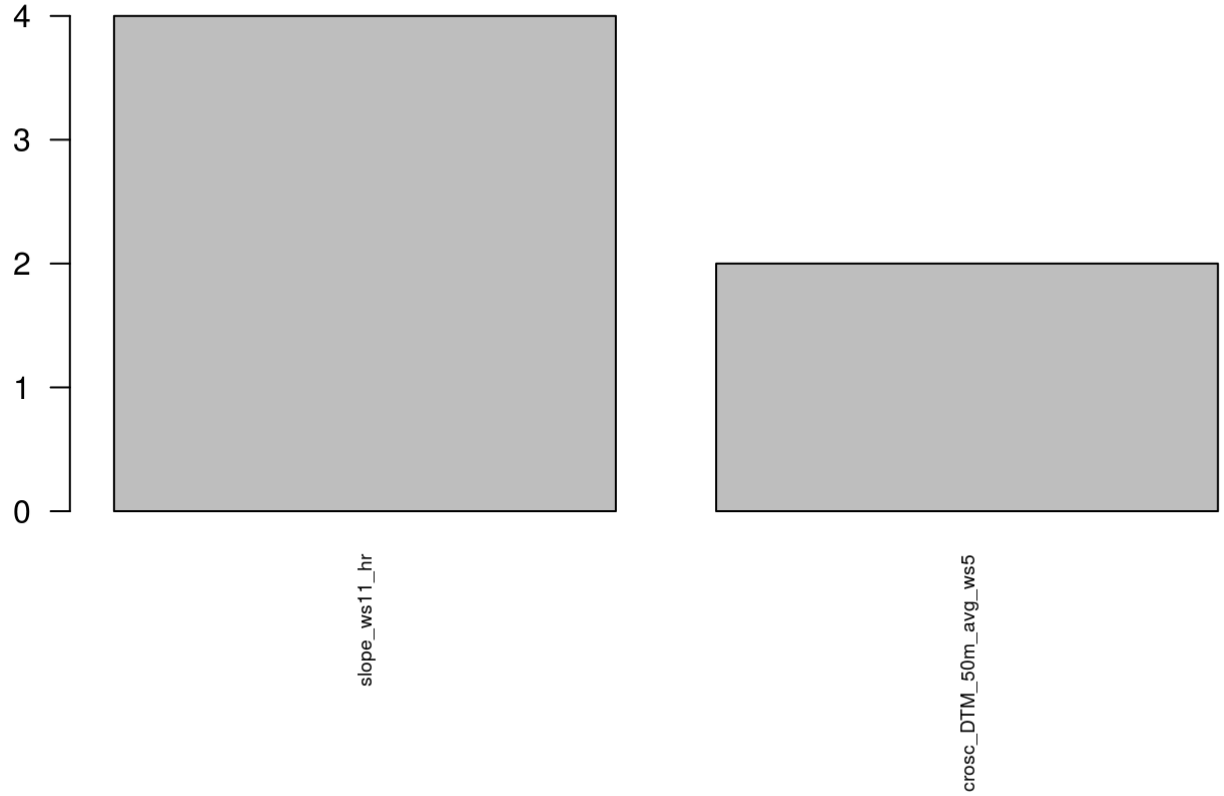


Local terrain

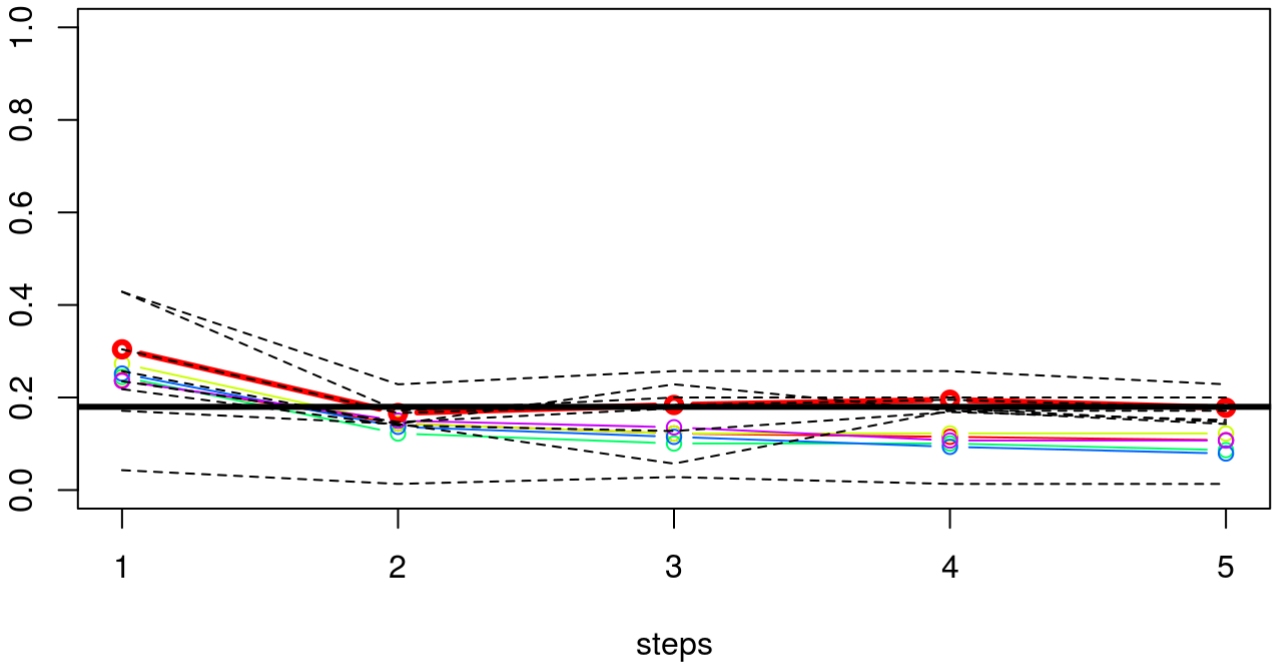
```
## [1] "Alluviale Ablagerung_vs_Kolluvium"
```



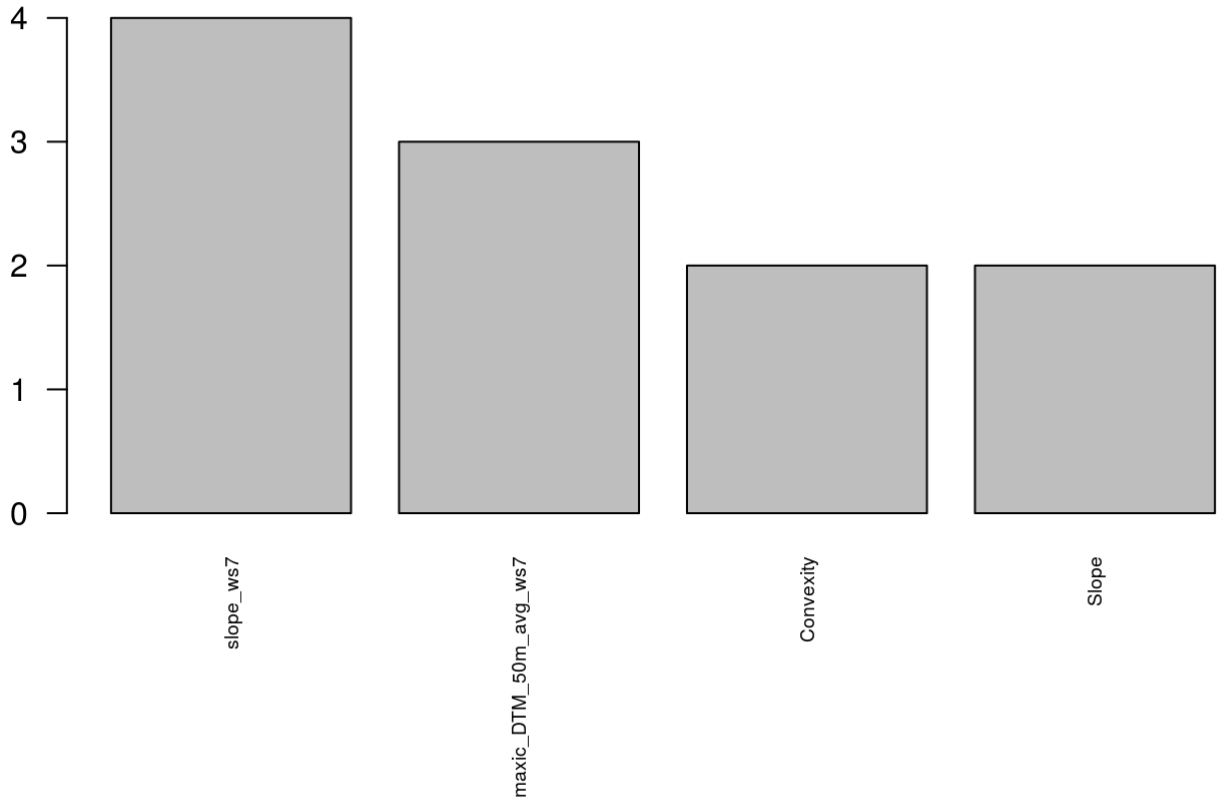

```
## [1] "Prediction error at end is:  0.288394062078273"
## [2] "Prediction error at end is:  0.346018893387314"
## [3] "Prediction error at end is:  0.324696356275304"
## [4] "Prediction error at end is:  0.330229419703104"
## [5] "Prediction error at end is:  0.324966261808367"
##                     k 1                   k 2                   k 3
## 1         slope_ws11_hr                 Slope         slope_ws11_hr
## 2 crosc_DTM_50m_avg_ws5 maxic_DTM_50m_avg_ws5       Total_Curvature
## 3            crosc_ws11         slope_ws19_hr crosc_DTM_50m_avg_ws5
## 4      ProfileCurvature slope_DTM_50m_avg_ws7             slope_ws7
## 5         maxic_ws13_hr maxic_DTM_50m_avg_ws3         longc_ws19_hr
##                     k 4                   k 5
## 1         slope_ws11_hr         slope_ws11_hr
## 2 LongitudinalCurvature maxic_DTM_50m_avg_ws7
## 3     Convergence_Index crosc_DTM_50m_avg_ws7
## 4 profc_DTM_50m_avg_ws3             minic_ws3
## 5     Minimal_Curvature planc_DTM_50m_avg_ws7
```



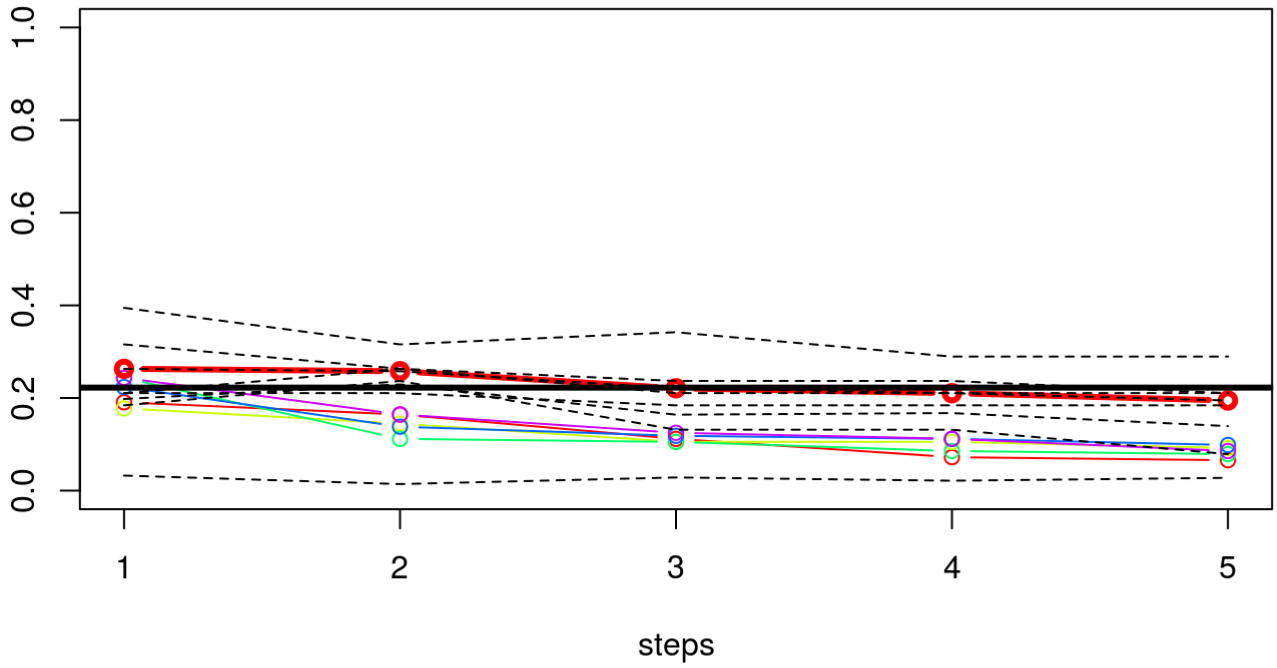

```
## [1] "Alluviale Ablagerung_vs_Moorablagerung"
```



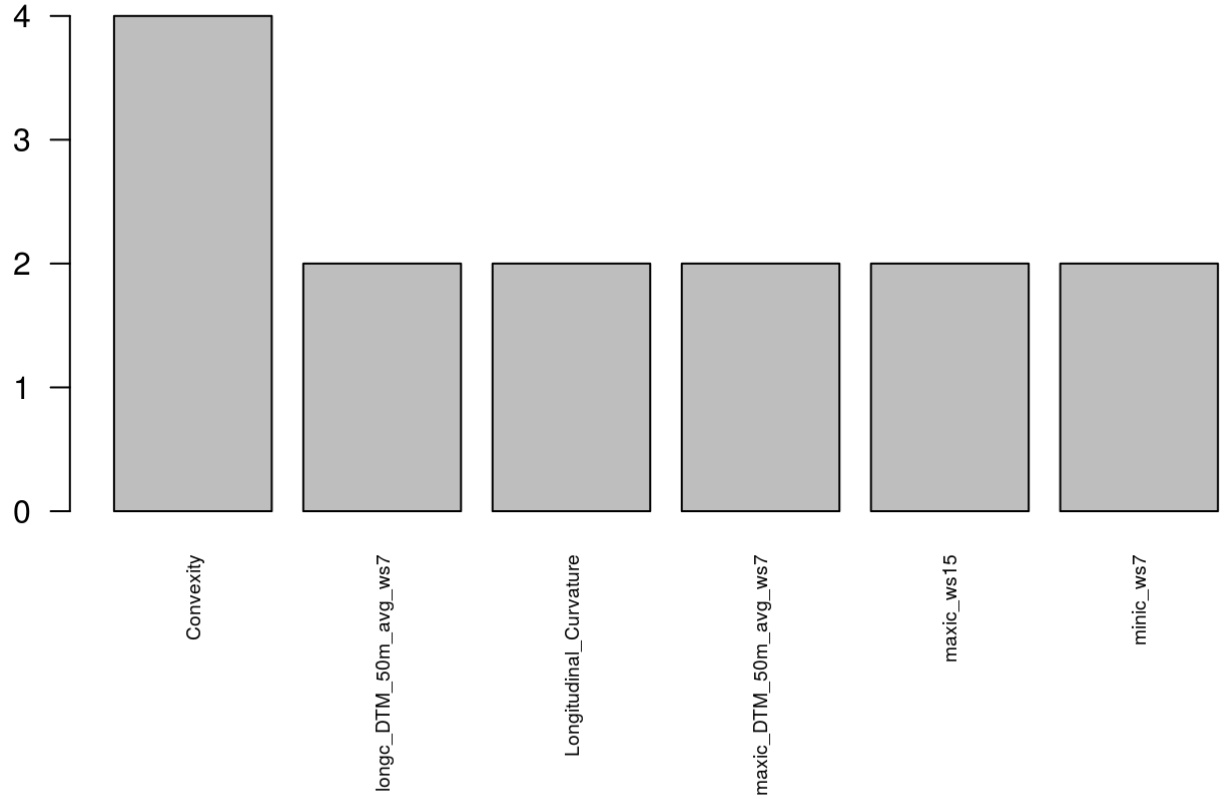
```
## [1] "Prediction error at end is:  0.304201680672269"
## [2] "Prediction error at end is:  0.166554621848739"
## [3] "Prediction error at end is:  0.183865546218487"
## [4] "Prediction error at end is:  0.195294117647059"
## [5] "Prediction error at end is:  0.177983193277311"
##                     k 1                   k 2                  k 3
## 1 longc_DTM_50m_avg_ws7 maxic_DTM_50m_avg_ws7                Slope
## 2 slope_DTM_50m_avg_ws3             slope_ws7 minic_DTM_50m_avg_ws7
## 3                 Slope          planc_ws7_hr crosc_DTM_50m_avg_ws3
## 4           slope_ws11     Convergence_Index slope_DTM_50m_avg_ws7
## 5         profc_ws5_hr profc_DTM_50m_avg_ws7             slope_ws7
##                     k 4                   k 5
## 1 maxic_DTM_50m_avg_ws7 maxic_DTM_50m_avg_ws7
## 2            slope_ws7             slope_ws7
## 3            Convexity             Convexity
## 4           minic_ws11         profc_ws23_hr
## 5         slope_ws3_hr         slope_ws13_hr
```



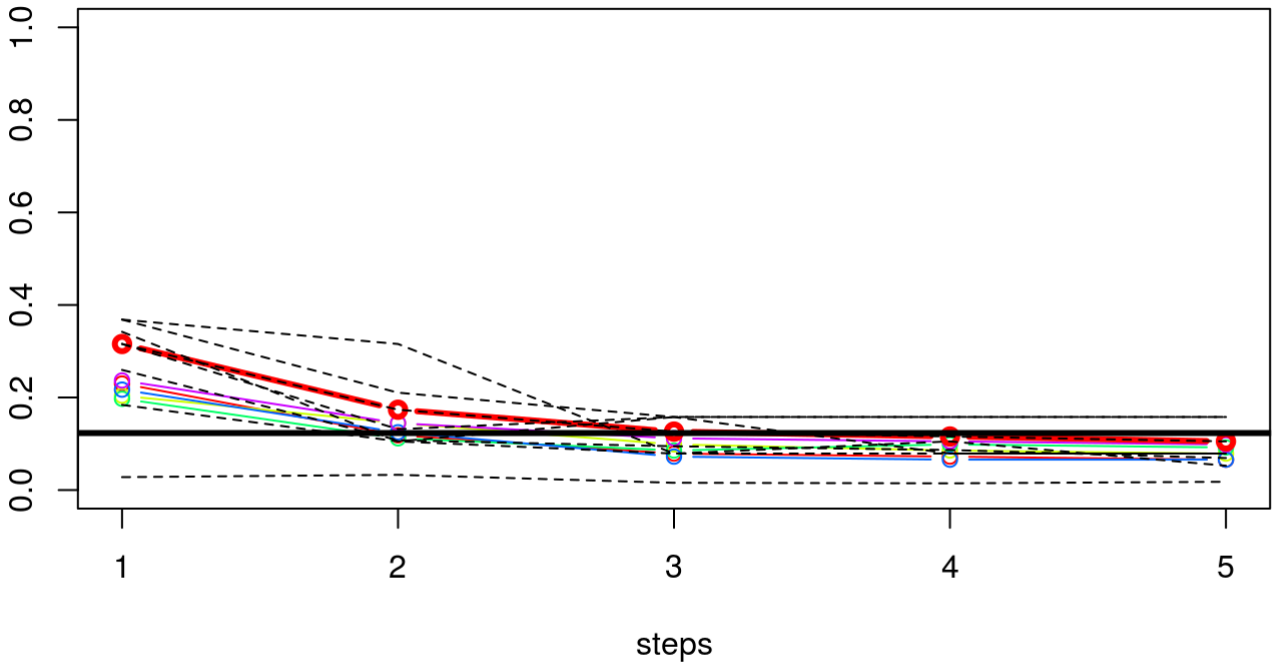

```
## [1] "Alluviale Ablagerung_vs_Glaziolakustrine Ablagerung"
```



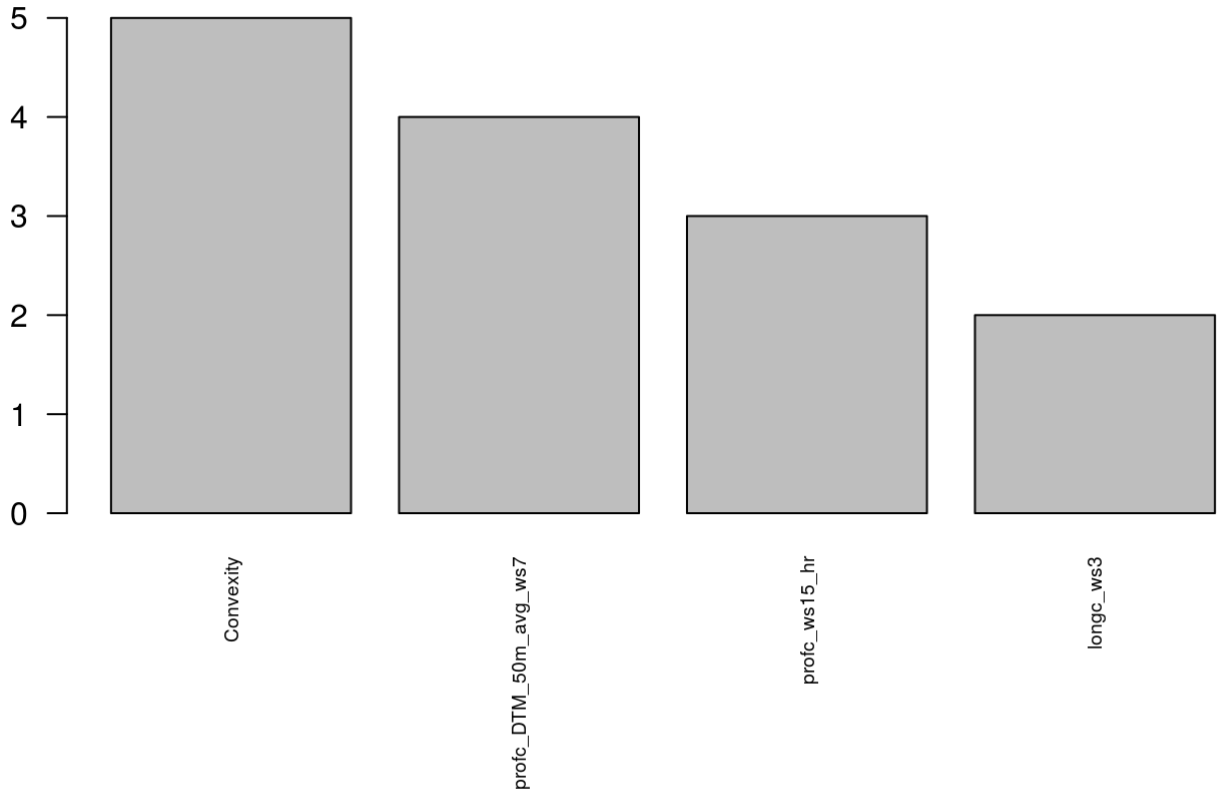

```
## [1] "Prediction error at end is:  0.263157894736842"
## [2] "Prediction error at end is:  0.257894736842105"
## [3] "Prediction error at end is:  0.221052631578947"
## [4] "Prediction error at end is:  0.210526315789474"
## [5] "Prediction error at end is:  0.194736842105263"
##                     k 1                    k 2                   k 3
## 1 longc_DTM_50m_avg_ws3 Longitudinal_Curvature longc_DTM_50m_avg_ws7
## 2 maxic_DTM_50m_avg_ws7              Convexity             crosc_ws7
## 3            maxic_ws15  profc_DTM_50m_avg_ws7             Convexity
## 4             Convexity              profc_ws5         profc_ws19_hr
## 5            crosc_ws15             maxic_ws15  Tangential_Curvature
##                     k 4                    k 5
## 1 longc_DTM_50m_avg_ws7 Longitudinal_Curvature
## 2            crosc_ws11    Flow_Line_Curvature
## 3             minic_ws7              Convexity
## 4      ProfileCurvature  maxic_DTM_50m_avg_ws7
## 5             maxic_ws5              minic_ws7
```



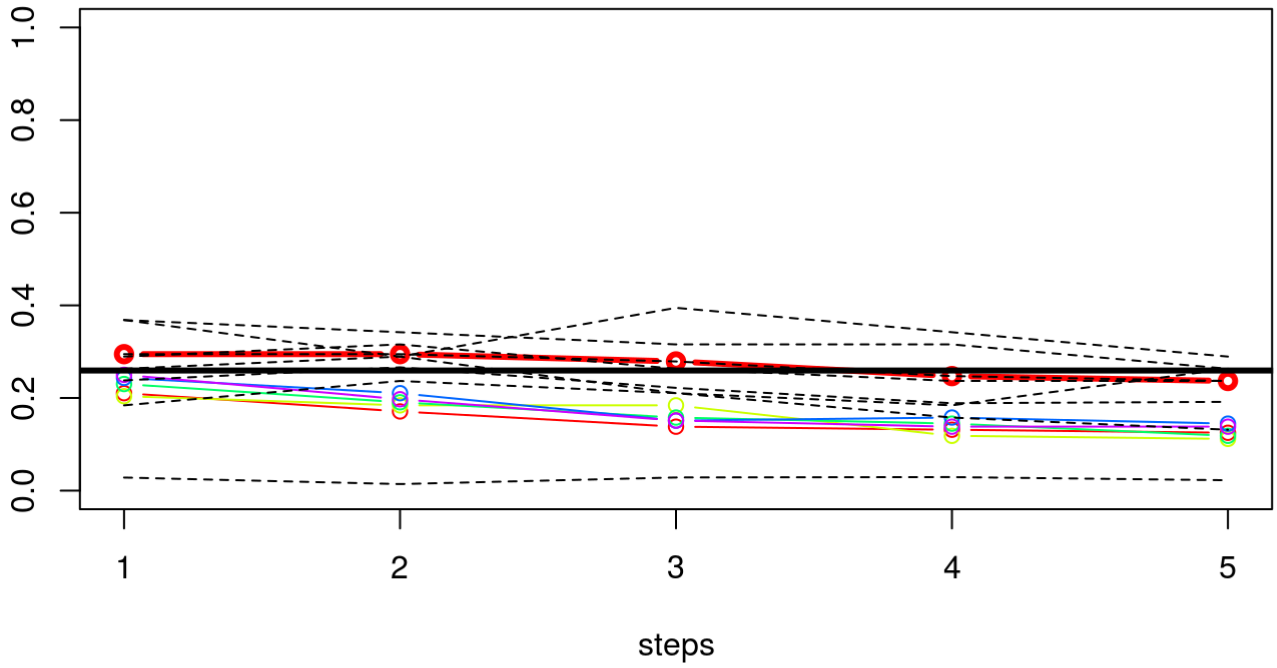

```
## [1] "Alluviale Ablagerung_vs_Grundmoraene"
```



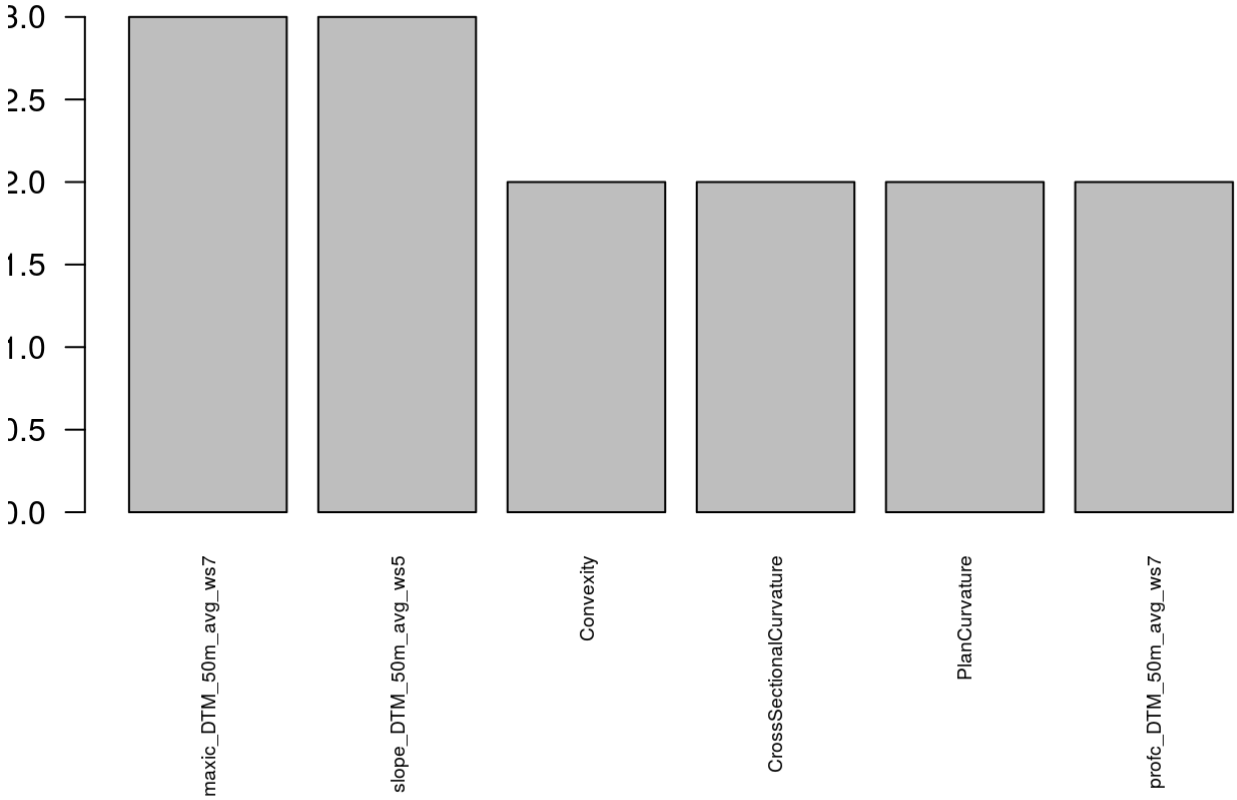
```
## [1] "Prediction error at end is:  0.315789473684211"
## [2] "Prediction error at end is:  0.173684210526316"
## [3] "Prediction error at end is:  0.126315789473684"
## [4] "Prediction error at end is:  0.115789473684211"
## [5] "Prediction error at end is:  0.105263157894737"
##                     k 1                   k 2                  k 3
## 1 profc_DTM_50m_avg_ws7 profc_DTM_50m_avg_ws7            Convexity
## 2             Convexity             Convexity         profc_ws15_hr
## 3         profc_ws15_hr minic_DTM_50m_avg_ws5 profc_DTM_50m_avg_ws7
## 4             longc_ws3         longc_ws15_hr             longc_ws3
## 5         profc_ws19_hr             minic_ws7                 Slope
##                     k 4                   k 5
## 1 longc_DTM_50m_avg_ws7          profc_ws15_hr
## 2             Convexity Longitudinal_Curvature
## 3            profc_ws15              Convexity
## 4             profc_ws5           profc_ws5_hr
## 5 profc_DTM_50m_avg_ws7              longc_ws5
```



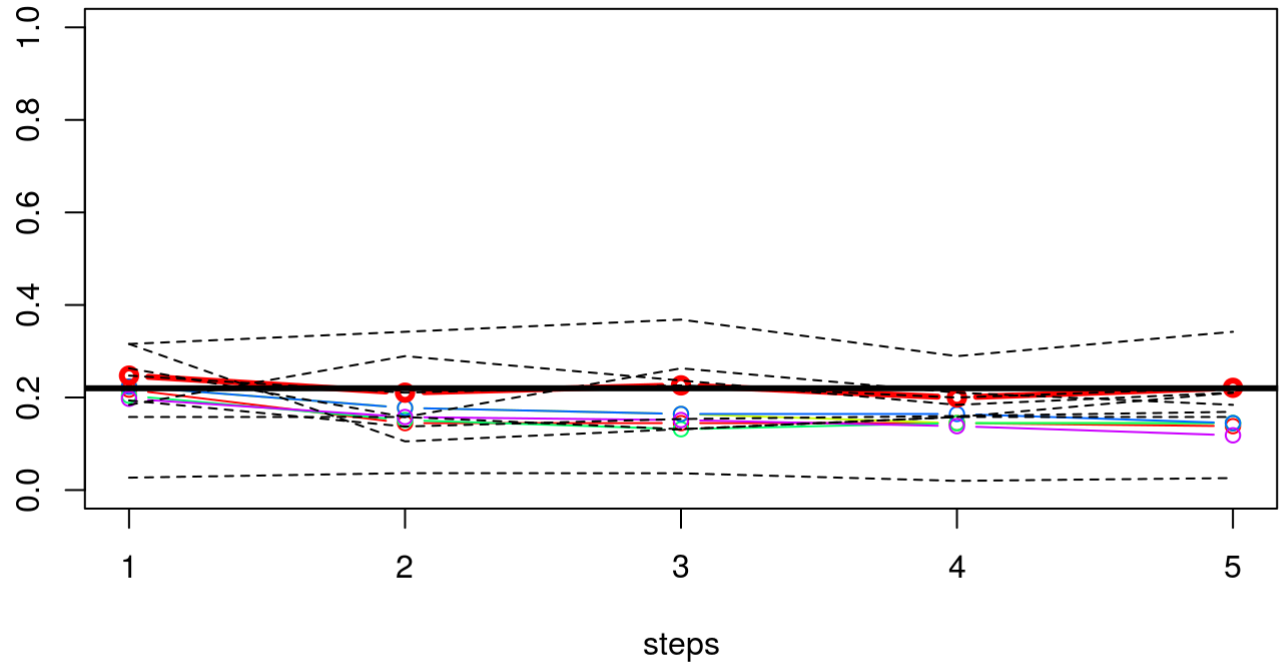

```
## [1] "Alluviale Ablagerung_vs_Moraene undifferenziert"
```



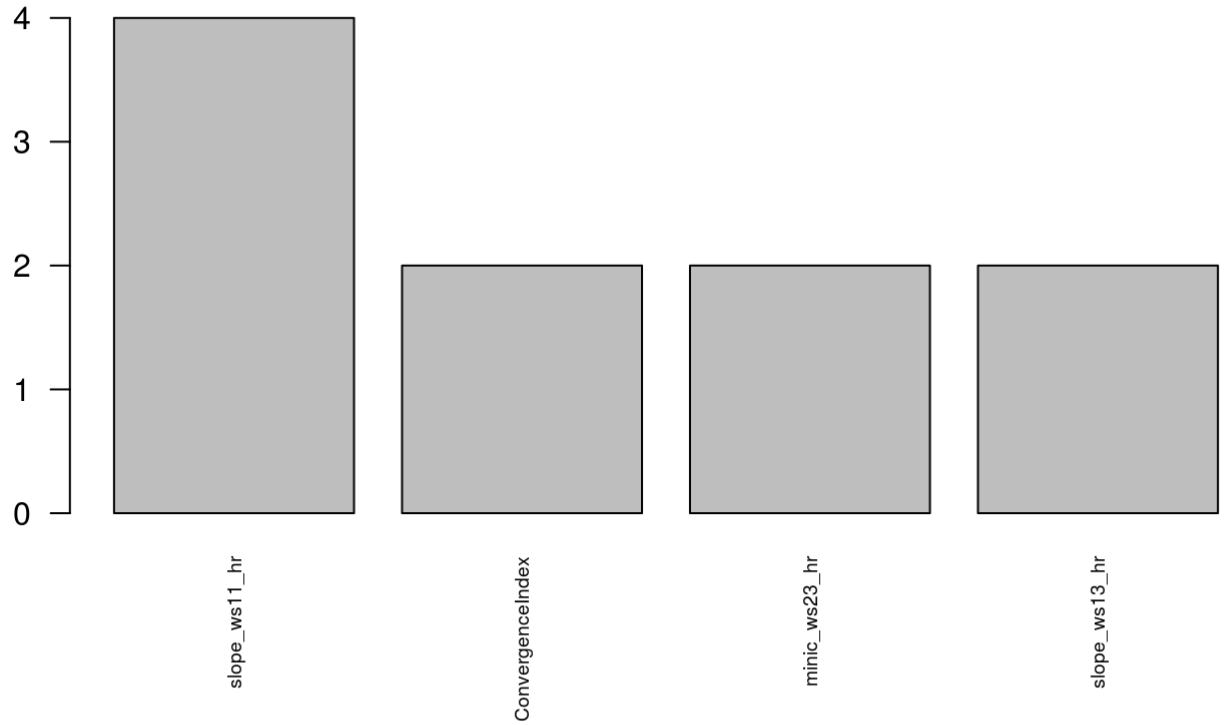

```
## [1] "Prediction error at end is:  0.294736842105263"
## [2] "Prediction error at end is:  0.294736842105263"
## [3] "Prediction error at end is:  0.278947368421053"
## [4] "Prediction error at end is:  0.247368421052632"
## [5] "Prediction error at end is:  0.236842105263158"
##                       k 1                   k 2                  k 3
## 1   slope_DTM_50m_avg_ws5 profc_DTM_50m_avg_ws7            maxic_ws7
## 2               Convexity profc_DTM_50m_avg_ws5        planc_ws29_hr
## 3           PlanCurvature maxic_DTM_50m_avg_ws7         planc_ws7_hr
## 4   longc_DTM_50m_avg_ws5             Convexity        PlanCurvature
## 5 CrossSectionalCurvature      ProfileCurvature LongitudinalCurvature
##                       k 4                   k 5
## 1   slope_DTM_50m_avg_ws5 profc_DTM_50m_avg_ws7
## 2   maxic_DTM_50m_avg_ws7 maxic_DTM_50m_avg_ws7
## 3   longc_DTM_50m_avg_ws7 slope_DTM_50m_avg_ws5
## 4 CrossSectionalCurvature         maxic_ws13_hr
## 5           profc_ws13_hr        TotalCurvature
```




```
## [1] "Alluviale Ablagerung_vs_gemischte Kegel"
```

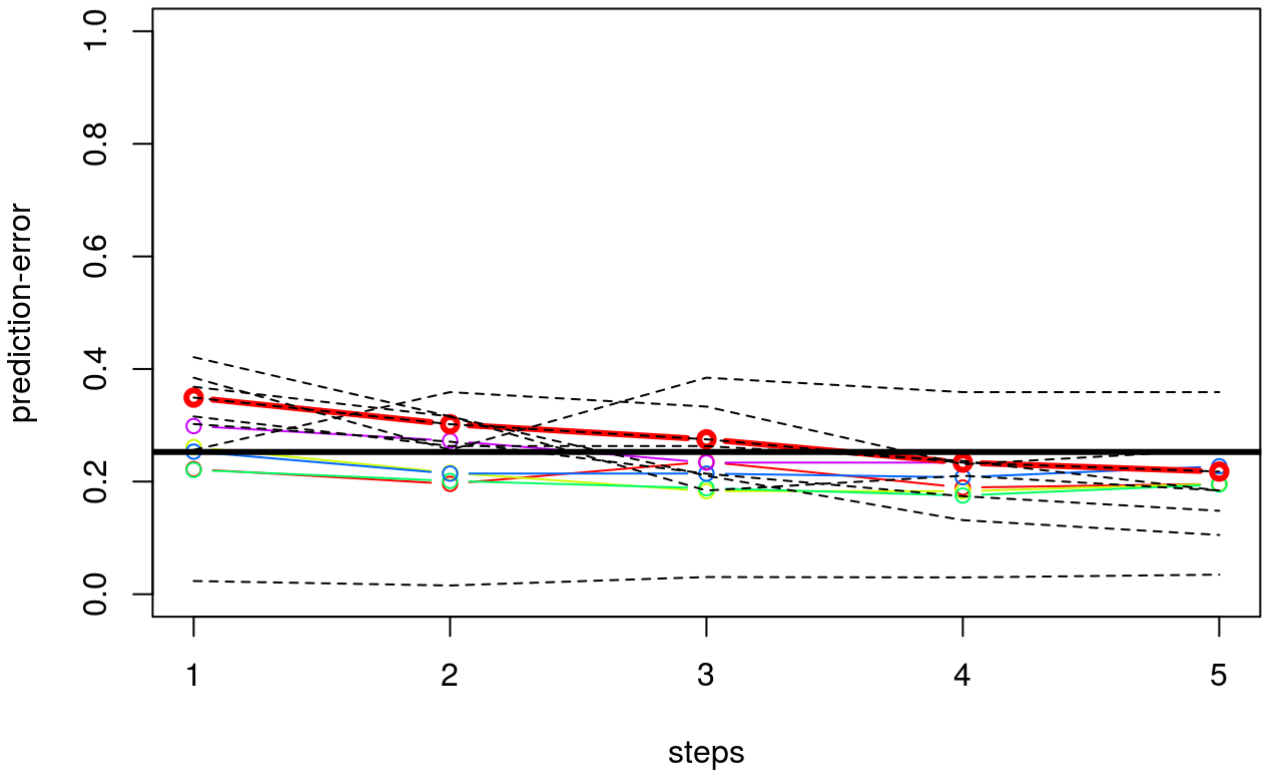


```
## [1] "Prediction error at end is:  0.247368421052632"
## [2] "Prediction error at end is:  0.210526315789474"
## [3] "Prediction error at end is:  0.226315789473684"
## [4] "Prediction error at end is:  0.2"
## [5] "Prediction error at end is:  0.221052631578947"
##                k 1           k 2                   k 3              k 4
## 1    slope_ws11_hr slope_ws13_hr         slope_ws11_hr    slope_ws11_hr
## 2 ConvergenceIndex     minic_ws3      ConvergenceIndex    minic_ws23_hr
## 3     slope_ws7_hr slope_ws11_hr             maxic_ws5  Total_Curvature
## 4    profc_ws13_hr     Convexity     Convergence_Index     planc_ws5_hr
## 5    maxic_ws23_hr minic_ws23_hr slope_DTM_50m_avg_ws7 MaximalCurvature
##                     k 5
## 1         slope_ws13_hr
## 2 profc_DTM_50m_avg_ws7
## 3             minic_ws5
## 4         planc_ws29_hr
## 5        TotalCurvature
```

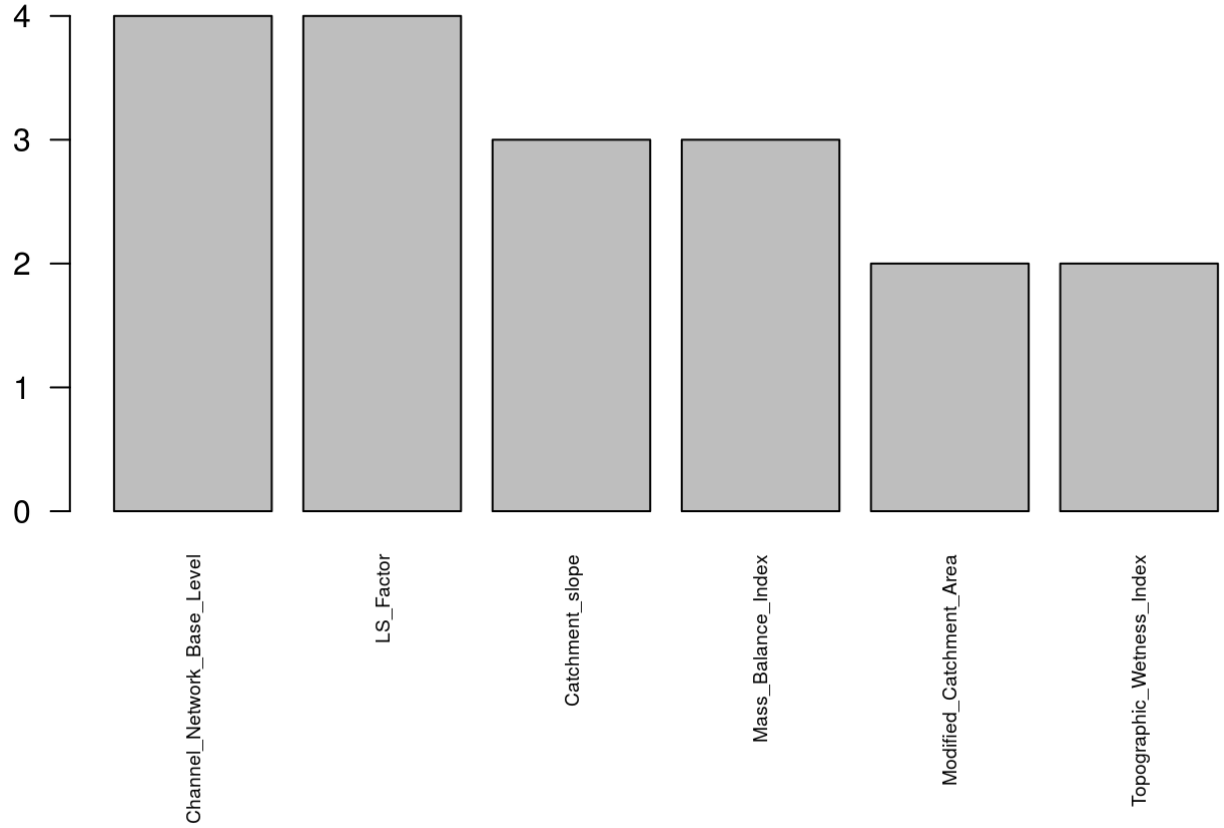


Regional terrain

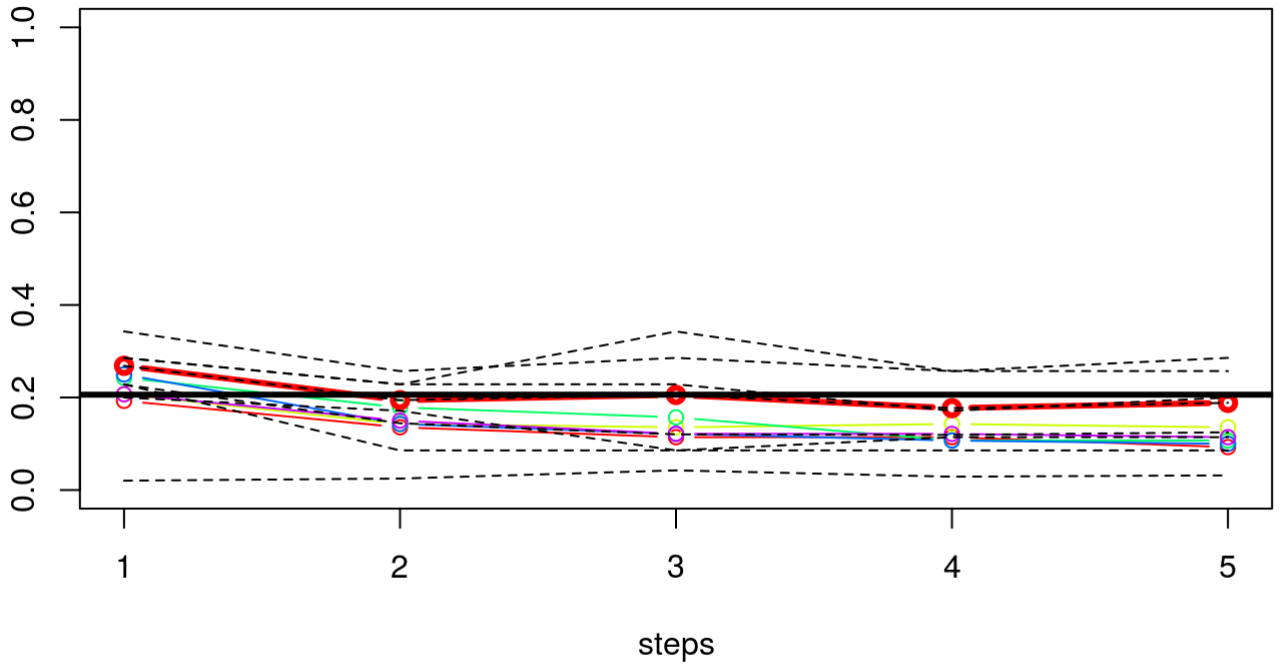
```
## [1] "Alluviale Ablagerung_vs_Kolluvium"
```



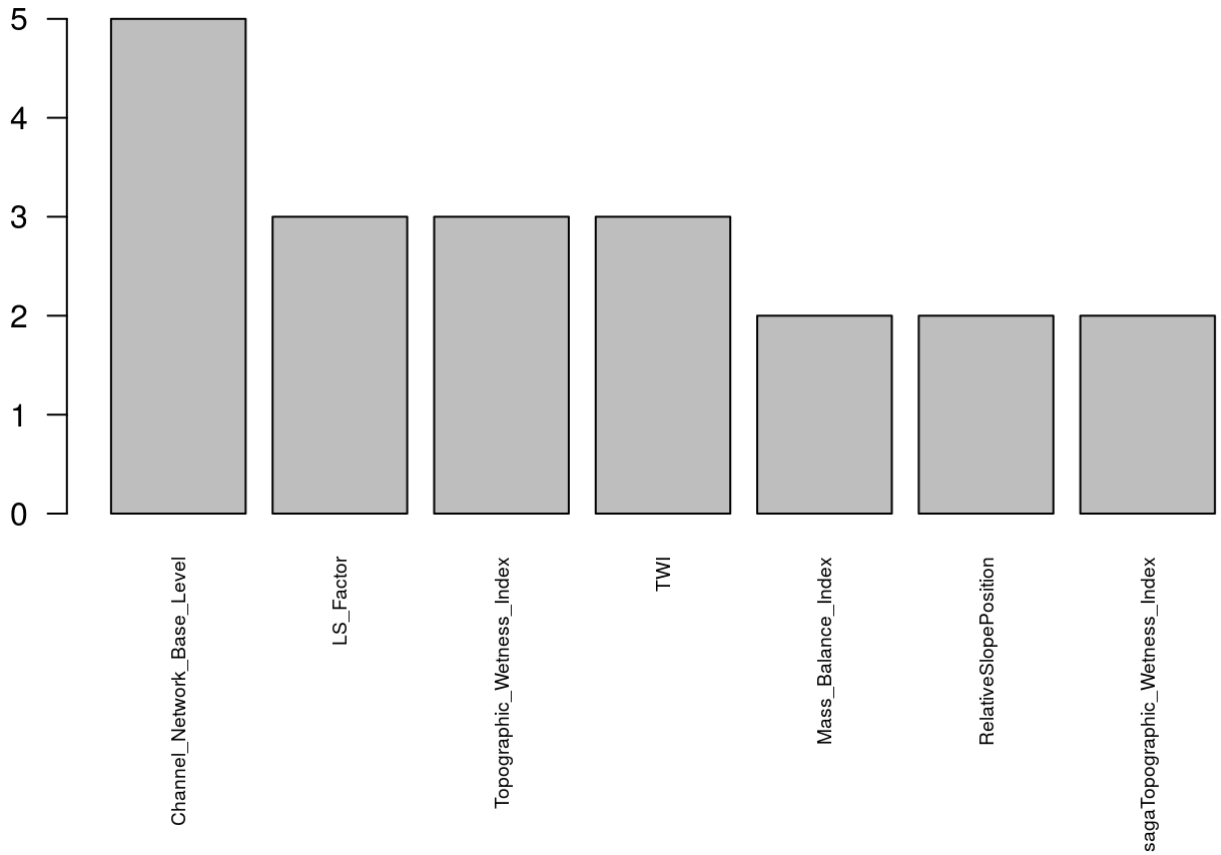

```
## [1] "Prediction error at end is:  0.349257759784076"
## [2] "Prediction error at end is:  0.302024291497976"
## [3] "Prediction error at end is:  0.275168690958165"
## [4] "Prediction error at end is:  0.233738191632928"
## [5] "Prediction error at end is:  0.217813765182186"
##                           k 1                    k 2
## 1                  LS_Factor         Catchment_slope
## 2           MassBalanceIndex               LS_Factor
## 3 Channel_Network_Base_Level                    TWI
## 4         Mass_Balance_Index TopographicWetnessIndex
## 5                   LSFactor       Catchment_area_hr
##                           k 3                        k 4
## 1                  LS_Factor             Catchment_slope
## 2         Mass_Balance_Index                   LS_Factor
## 3 Channel_Network_Base_Level Channel_Network_Base_Level
## 4            Catchment_slope  Topographic_Wetness_Index
## 5            Catchment_Area2    Modified_Catchment_Area
##                             k 5
## 1 sagaTopographic_Wetness_Index
## 2     Topographic_Wetness_Index
## 3    Channel_Network_Base_Level
## 4            Mass_Balance_Index
## 5       Modified_Catchment_Area
```



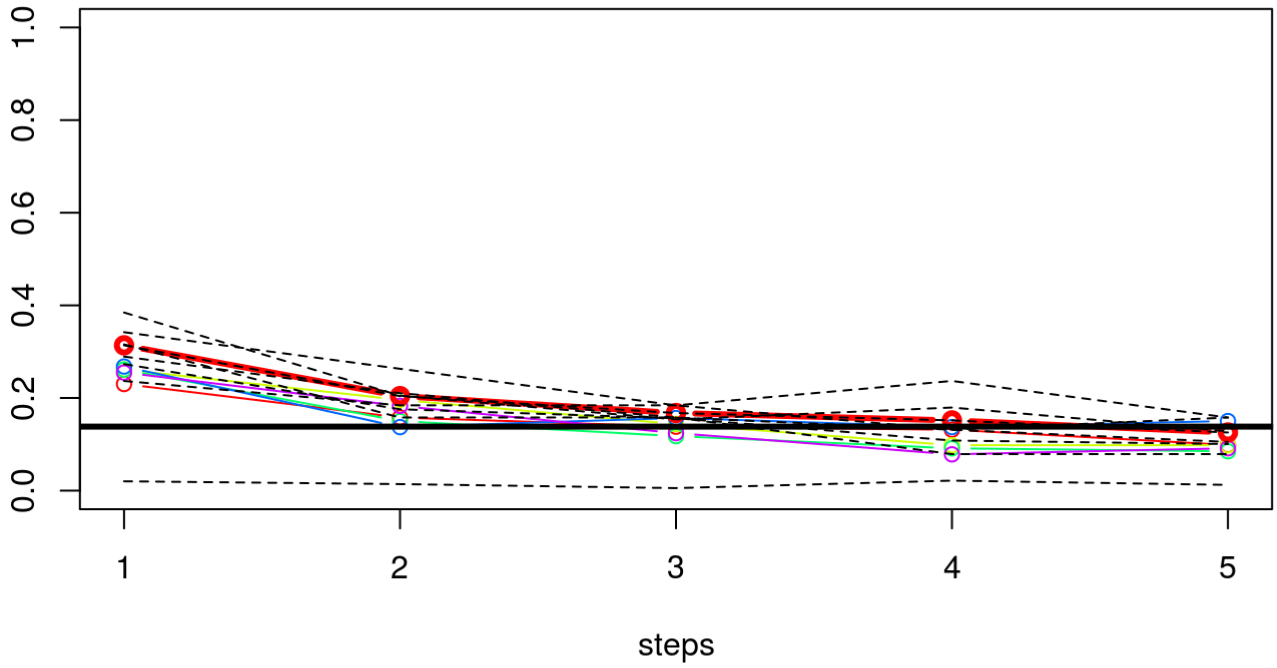

```
## [1] "Alluviale Ablagerung_vs_Moorablagerung"
```



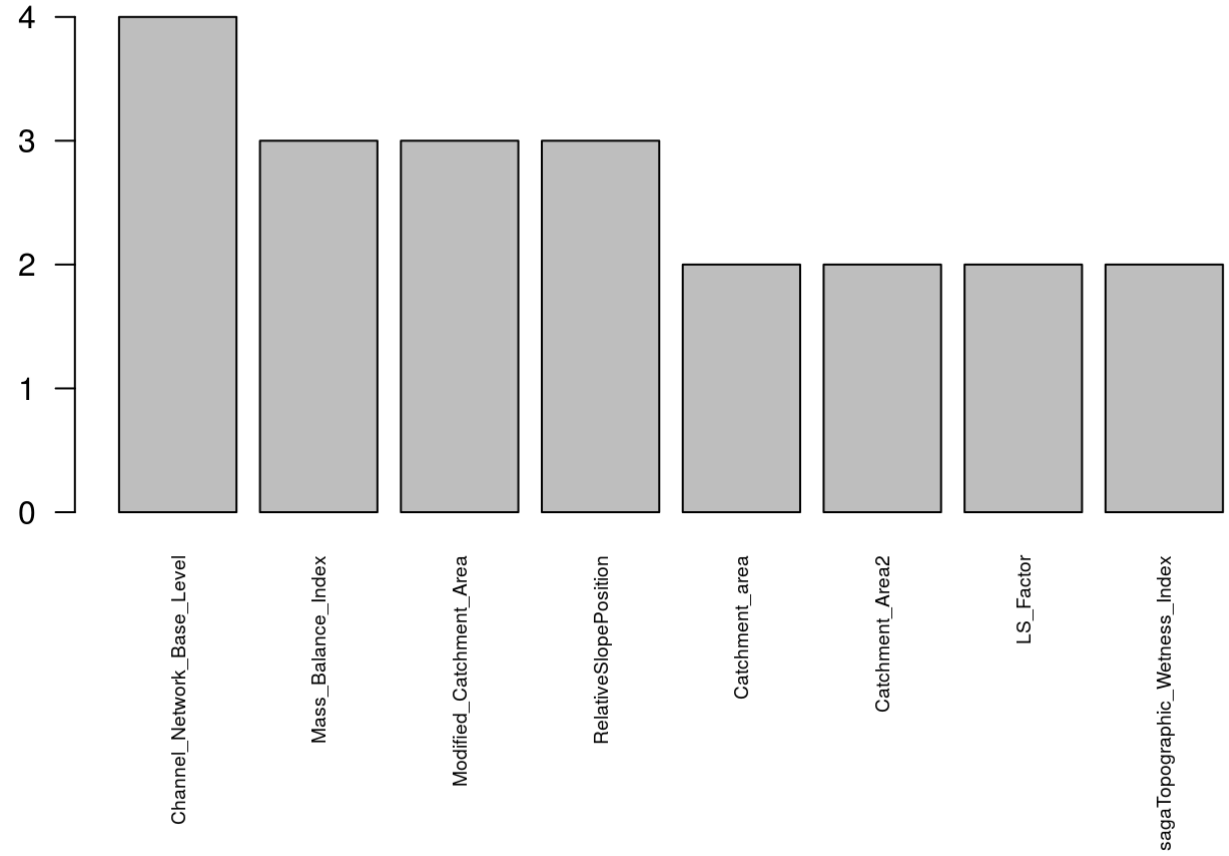
```
## [1] "Prediction error at end is:  0.268571428571429"
## [2] "Prediction error at end is:  0.194285714285714"
## [3] "Prediction error at end is:  0.205714285714286"
## [4] "Prediction error at end is:  0.177142857142857"
## [5] "Prediction error at end is:  0.188571428571429"
##                             k 1                         k 2
## 1    Channel_Network_Base_Level                   LSFactor
## 2     Topographic_Wetness_Index Channel_Network_Base_Level
## 3                     LS_Factor           MassBalanceIndex
## 4                            TWI      RelativeSlopePosition
## 5 sagaTopographic_Wetness_Index    Modified_Catchment_Area
##                           k 3                           k 4
## 1 Channel_Network_Base_Level    Channel_Network_Base_Level
## 2                  LS_Factor     Topographic_Wetness_Index
## 3            Catchment_Area2 sagaTopographic_Wetness_Index
## 4                           TWI         RelativeSlopePosition
## 5    TopographicWetnessIndex            Mass_Balance_Index
##                           k 5
## 1 Channel_Network_Base_Level
## 2  Topographic_Wetness_Index
## 3                  LS_Factor
## 4                        TWI
## 5         Mass_Balance_Index
```



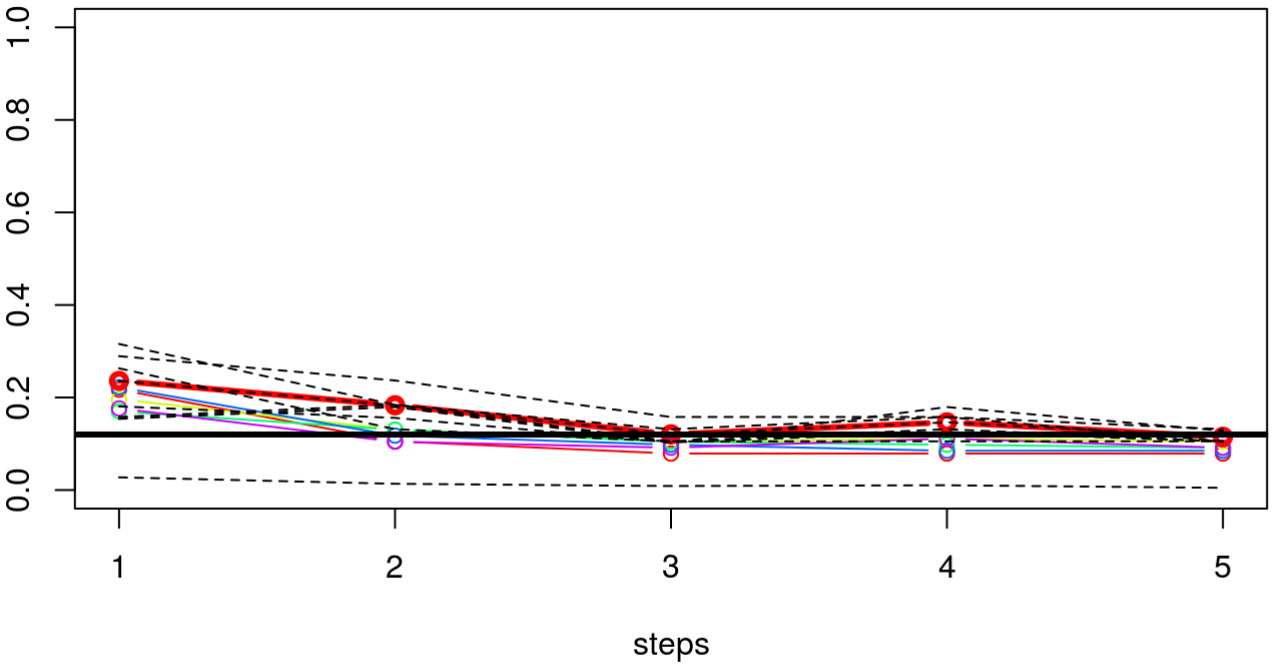

```
## [1] "Alluviale Ablagerung_vs_Glaziolakustrine Ablagerung"
```



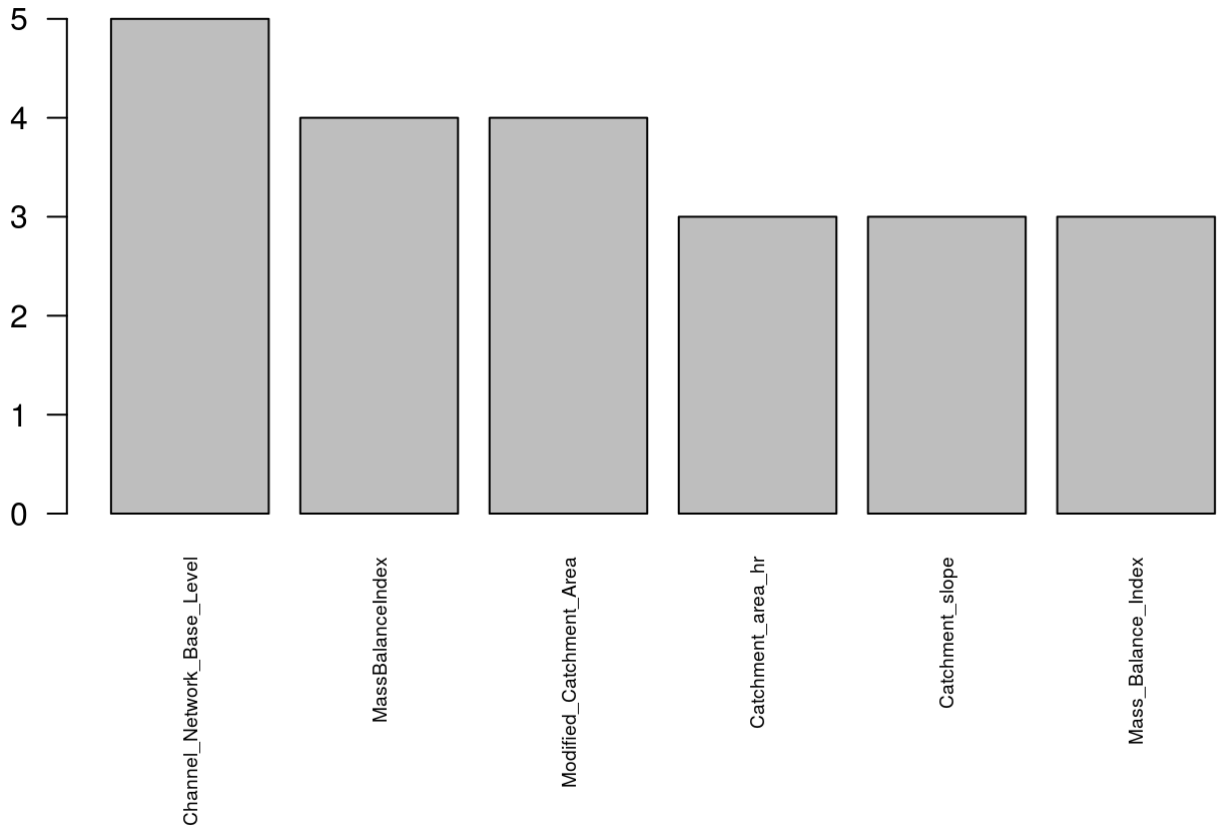

```
## [1] "Prediction error at end is:  0.313765182186235"
## [2] "Prediction error at end is:  0.204183535762483"
## [3] "Prediction error at end is:  0.167611336032389"
## [4] "Prediction error at end is:  0.151686909581646"
## [5] "Prediction error at end is:  0.125641025641026"
##                           k 1                          k 2
## 1      RelativeSlopePosition         Mass_Balance_Index
## 2            Catchment_slope    Modified_Catchment_Area
## 3    Modified_Catchment_Area            Catchment_Area2
## 4 Channel_Network_Base_Level Channel_Network_Base_Level
## 5            Catchment_Area2                  LS_Factor
##                             k 3                         k 4
## 1         RelativeSlopePosition     RelativeSlopePosition
## 2    Channel_Network_Base_Level                   LSFactor
## 3 sagaTopographic_Wetness_Index                 LS_Factor
## 4                Catchment_area Topographic_Wetness_Index
## 5            Mass_Balance_Index   Modified_Catchment_Area
##                             k 5
## 1            Mass_Balance_Index
## 2    Channel_Network_Base_Level
## 3 sagaTopographic_Wetness_Index
## 4                Catchment_area
## 5             Catchment_area_hr
```



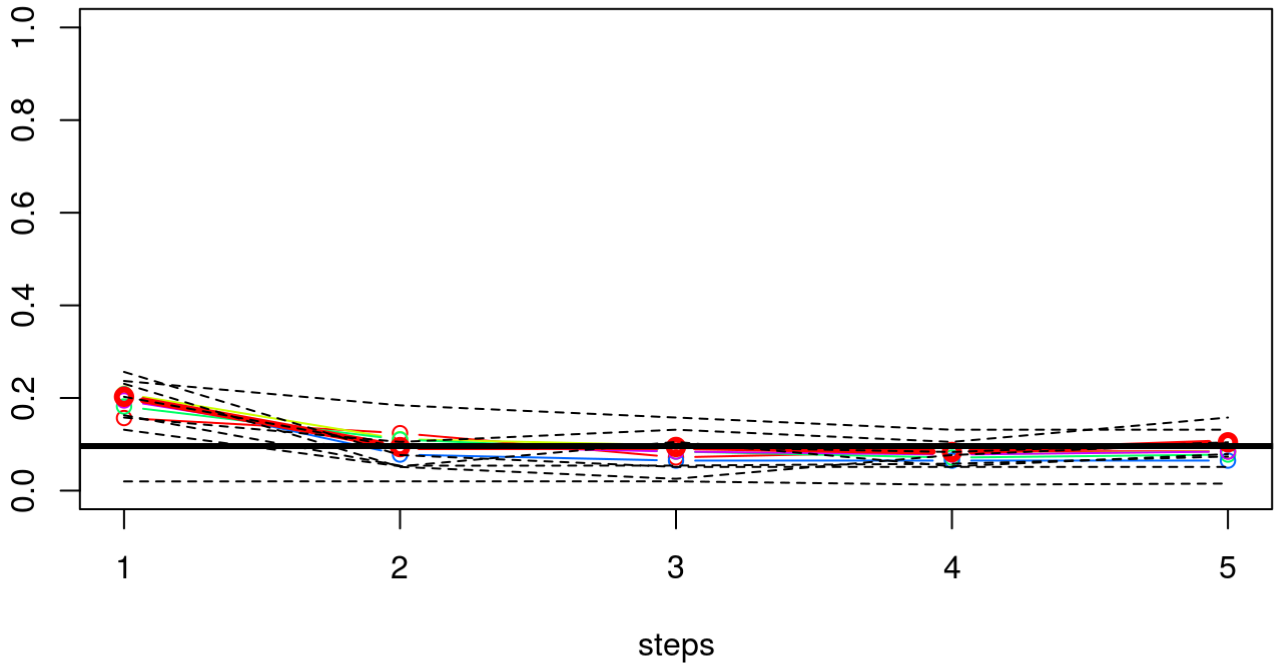

```
## [1] "Alluviale Ablagerung_vs_Grundmoraene"
```



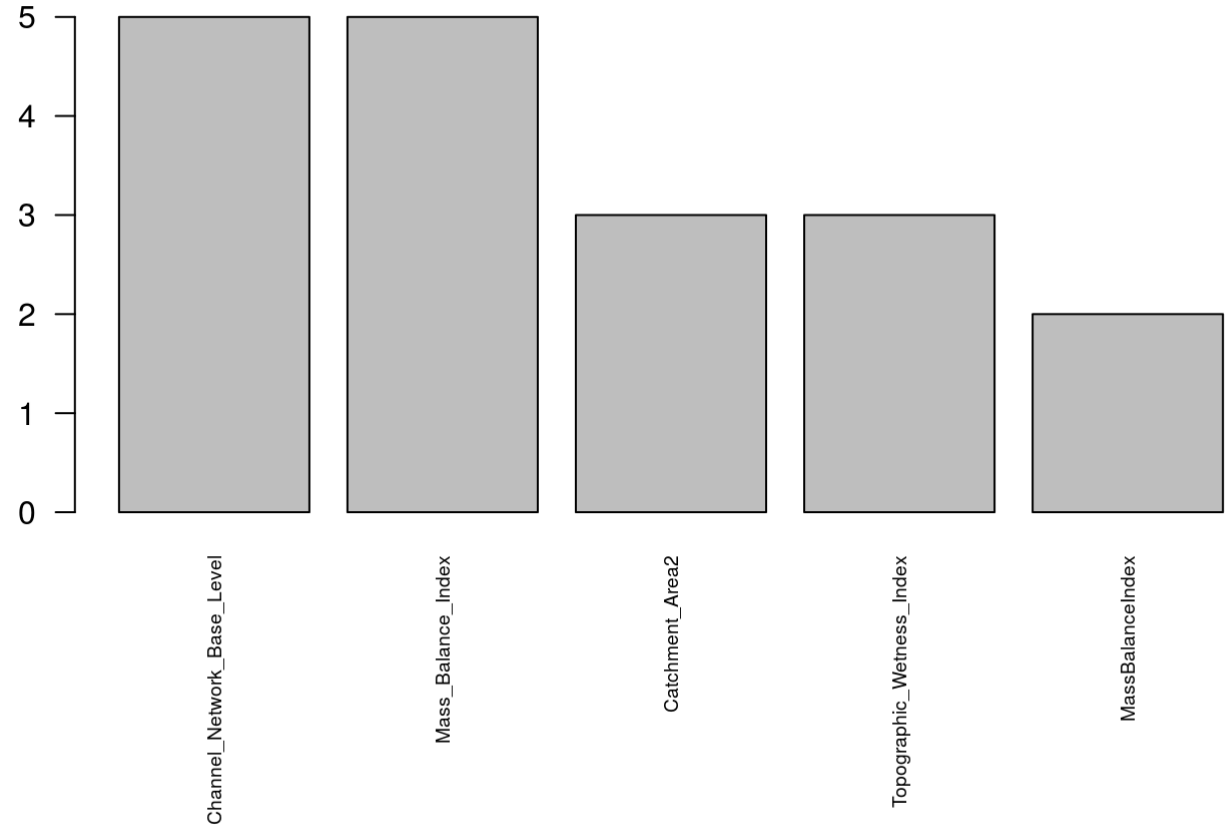
```
## [1] "Prediction error at end is:  0.236032388663968"
## [2] "Prediction error at end is:  0.183265856950067"
## [3] "Prediction error at end is:  0.120512820512821"
## [4] "Prediction error at end is:  0.14642375168691"
## [5] "Prediction error at end is:  0.115114709851552"
##                          k 1                          k 2
## 1 Channel_Network_Base_Level Channel_Network_Base_Level
## 2    Modified_Catchment_Area            Catchment_slope
## 3         Mass_Balance_Index             Catchment_area
## 4                        TWI          Catchment_area_hr
## 5          MassBalanceIndex    Modified_Catchment_Area
##                          k 3                            k 4
## 1 Channel_Network_Base_Level              Catchment_slope
## 2    Modified_Catchment_Area sagaTopographic_Wetness_Index
## 3         Mass_Balance_Index    Channel_Network_Base_Level
## 4          Catchment_area_hr             MassBalanceIndex
## 5          MassBalanceIndex            Catchment_area_hr
##                          k 5
## 1 Channel_Network_Base_Level
## 2    Modified_Catchment_Area
## 3           Catchment_slope
## 4          MassBalanceIndex
## 5         Mass_Balance_Index
```



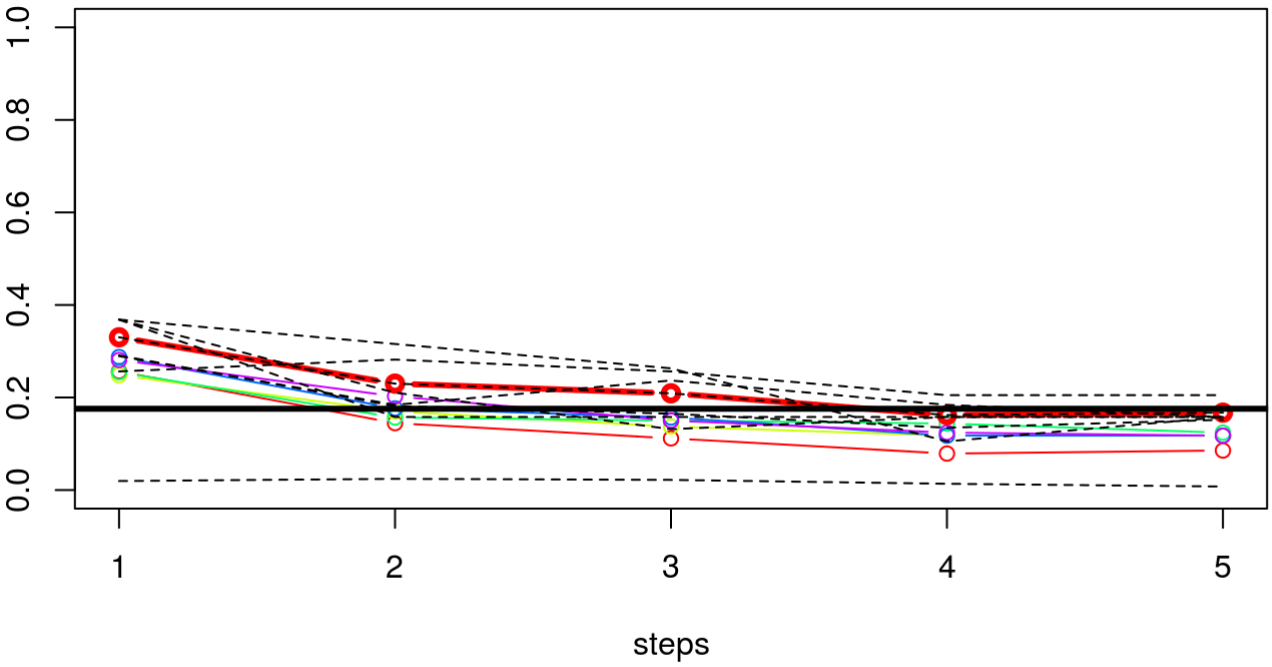

```
## [1] "Alluviale Ablagerung_vs_Moraene undifferenziert"
```



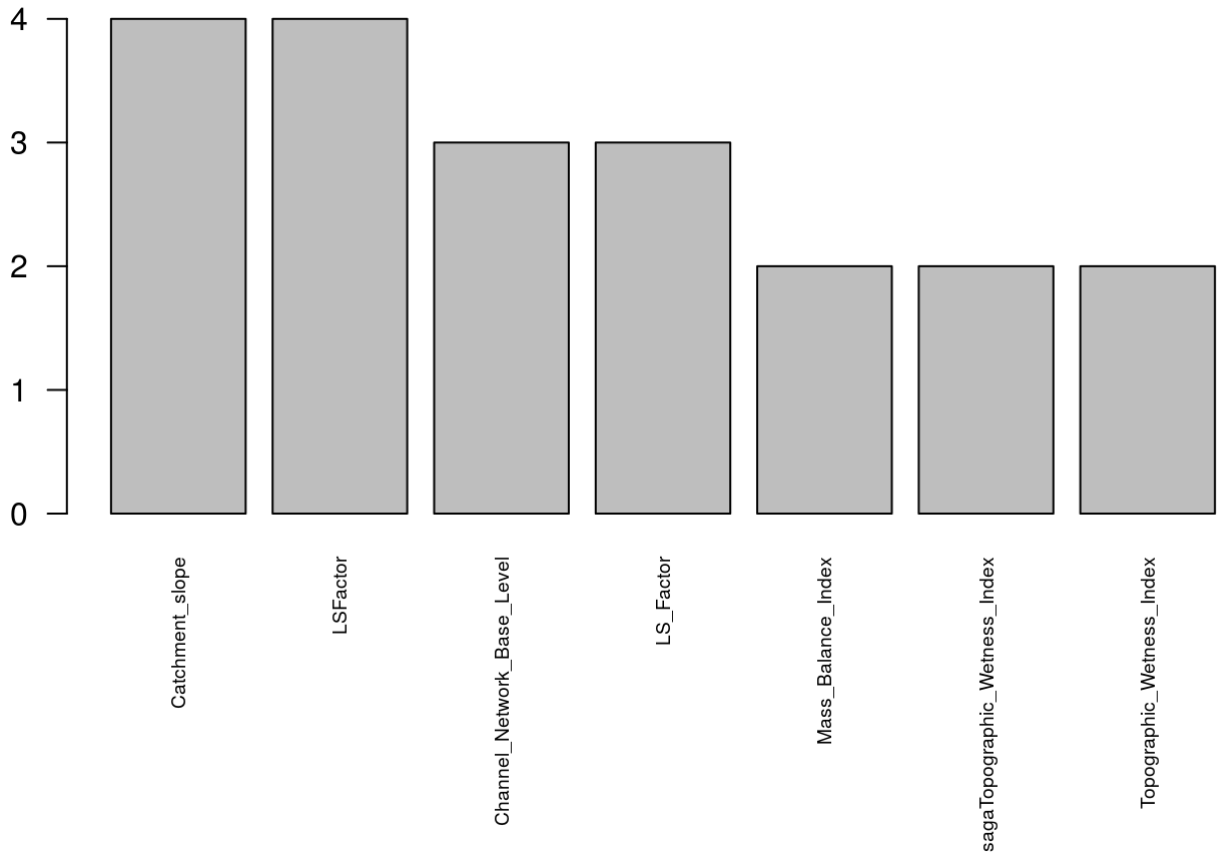

```
## [1] "Prediction error at end is:  0.202699055330634"
## [2] "Prediction error at end is:  0.0940620782726046"
## [3] "Prediction error at end is:  0.094331983805668"
## [4] "Prediction error at end is:  0.0835357624831309"
## [5] "Prediction error at end is:  0.104453441295547"
##                             k 1                         k 2
## 1    Channel_Network_Base_Level Channel_Network_Base_Level
## 2            Mass_Balance_Index         Mass_Balance_Index
## 3                    LS_Factor            Catchment_Area2
## 4     Topographic_Wetness_Index      RelativeSlopePosition
## 5 sagaTopographic_Wetness_Index           MassBalanceIndex
##                           k 3                         k 4
## 1    Modified_Catchment_Area Channel_Network_Base_Level
## 2 Channel_Network_Base_Level         Mass_Balance_Index
## 3         Mass_Balance_Index            Catchment_Area2
## 4                        TWI  Topographic_Wetness_Index
## 5                  LSFactor             Catchment_area
##                           k 5
## 1 Channel_Network_Base_Level
## 2         Mass_Balance_Index
## 3  Topographic_Wetness_Index
## 4           MassBalanceIndex
## 5            Catchment_Area2
```




```
## [1] "Alluviale Ablagerung_vs_gemischte Kegel"
```

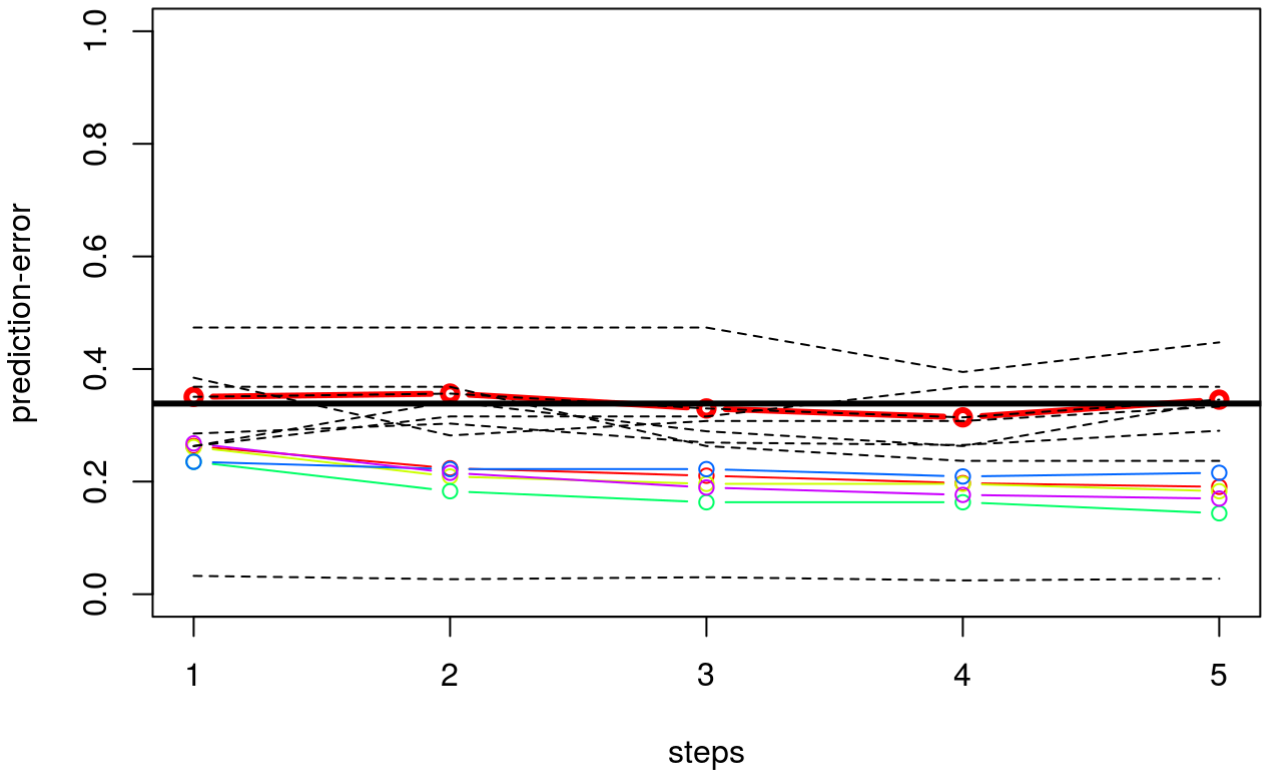


```
## [1] "Prediction error at end is:  0.330229419703104"
## [2] "Prediction error at end is:  0.230094466936572"
## [3] "Prediction error at end is:  0.209176788124157"
## [4] "Prediction error at end is:  0.162078272604588"
## [5] "Prediction error at end is:  0.167341430499325"
##                             k 1                          k 2
## 1              Catchment_slope            Catchment_Area2
## 2 sagaTopographic_Wetness_Index            Catchment_slope
## 3    Channel_Network_Base_Level                  LS_Factor
## 4     Topographic_Wetness_Index Channel_Network_Base_Level
## 5                      LSFactor    Modified_Catchment_Area
##                             k 3                          k 4
## 1                      LSFactor            Catchment_area
## 2            Mass_Balance_Index Topographic_Wetness_Index
## 3             Catchment_area_hr           Catchment_slope
## 4 sagaTopographic_Wetness_Index                 LS_Factor
## 5         RelativeSlopePosition                  LSFactor
##                           k 5
## 1 Channel_Network_Base_Level
## 2         Mass_Balance_Index
## 3            Catchment_slope
## 4                  LS_Factor
## 5                   LSFactor
```

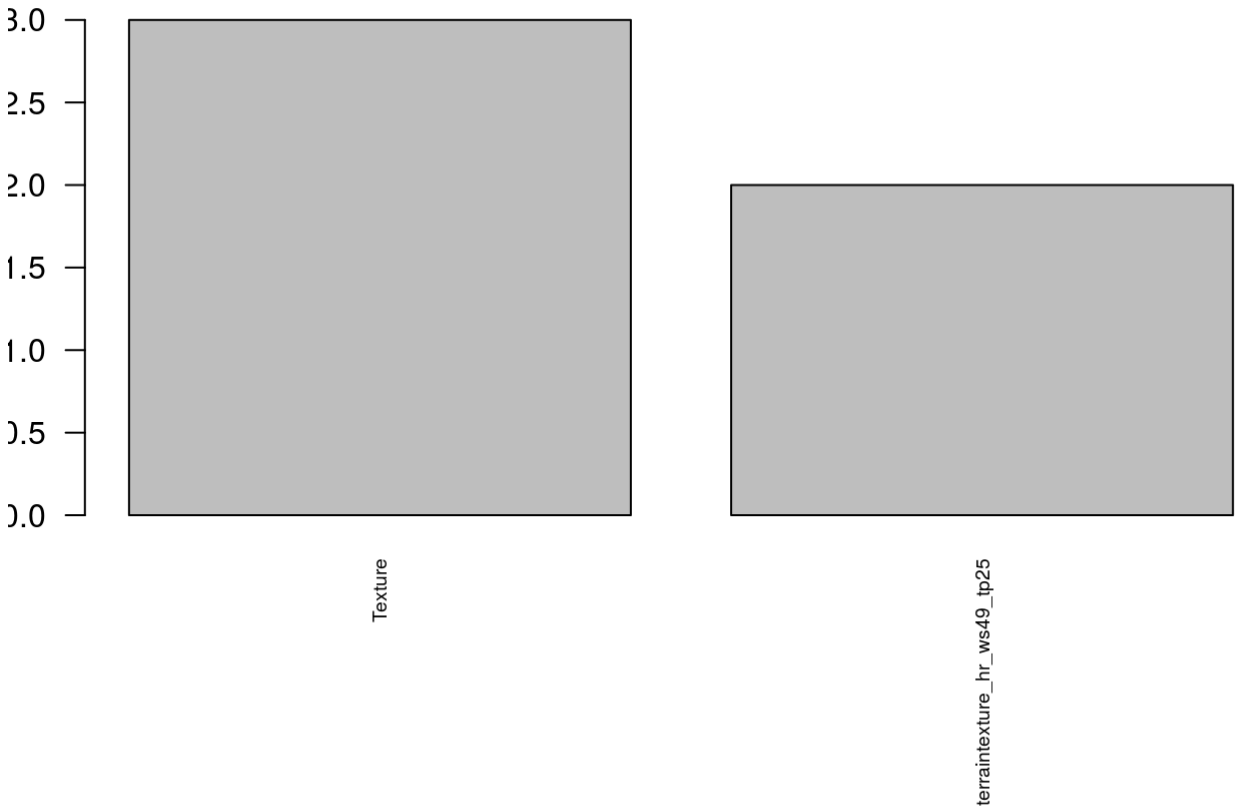


roughness

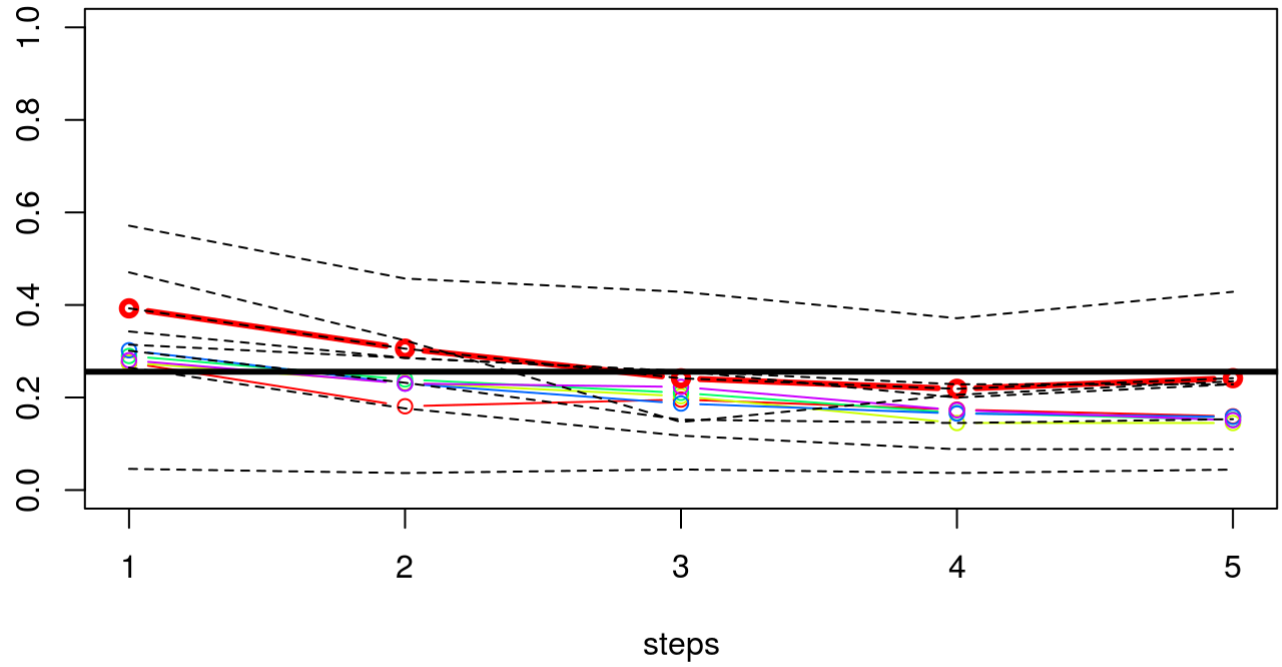
```
## [1] "Alluviale Ablagerung_vs_Kolluvium"
```



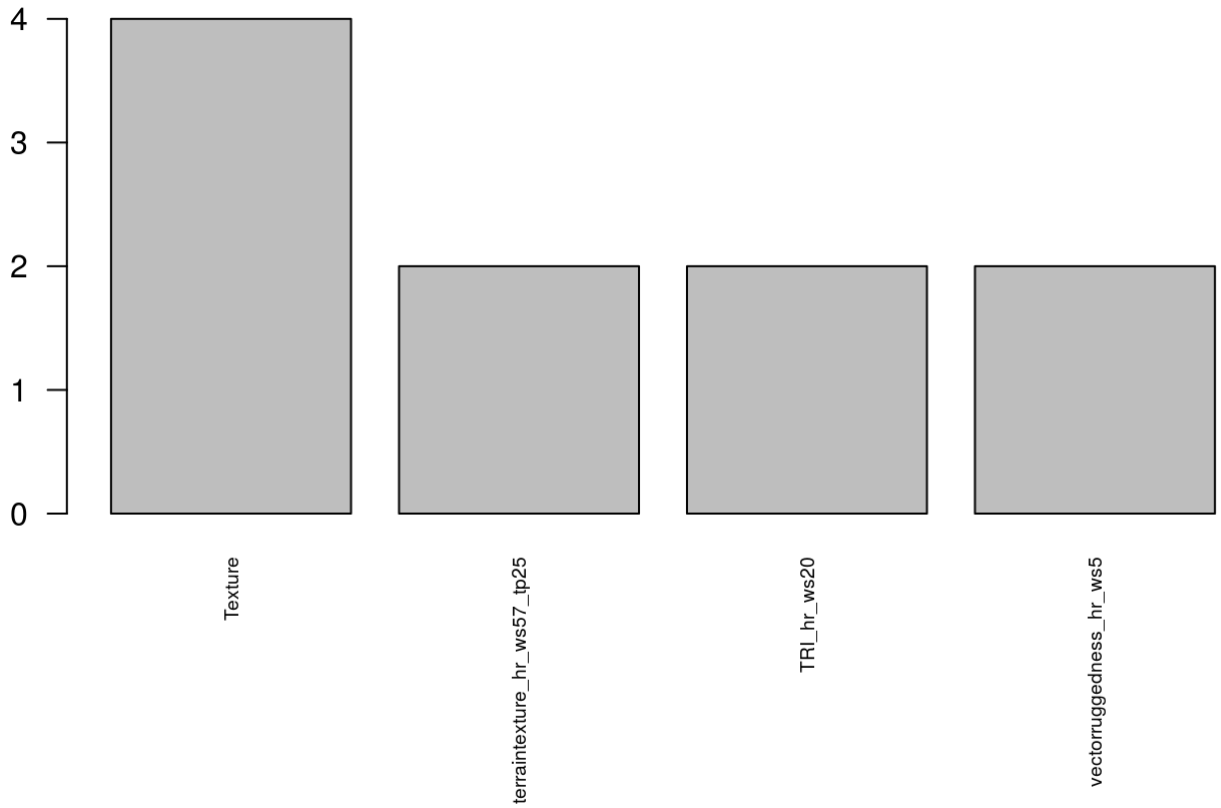

```
## [1] "Prediction error at end is:  0.350607287449393"
## [2] "Prediction error at end is:  0.356410256410256"
## [3] "Prediction error at end is:  0.32995951417004"
## [4] "Prediction error at end is:  0.31417004048583"
## [5] "Prediction error at end is:  0.345614035087719"
##                         k 1                          k 2
## 1 vectorruggedness_hr_ws43                      Texture
## 2 vectorruggedness_hr_ws49                 TRI_hr_ws20
## 3              TRI_hr_ws14    vectorruggedness_hr_ws29
## 4 vectorruggedness_hr_ws51               fischerk_ws29
## 5             fischerk_ws7 terraintexture_hr_ws49_tp25
##                         k 3                          k 4
## 1              TRI_hr_ws21 terraintexture_hr_ws49_tp25
## 2                  Texture                fischerk_ws5
## 3 vectorruggedness_hr_ws59                 TRI_hr_ws22
## 4               TRI_hr_ws6  terraintexture_hr_ws37_tp5
## 5              TRI_hr_ws25  terraintexture_hr_ws45_tp5
##                       k 5
## 1                 Texture
## 2 vectorstrength_hr_ws15
## 3  vectorstrength_hr_ws5
## 4          fischerk_ws17
## 5            TRI_hr_ws18
```



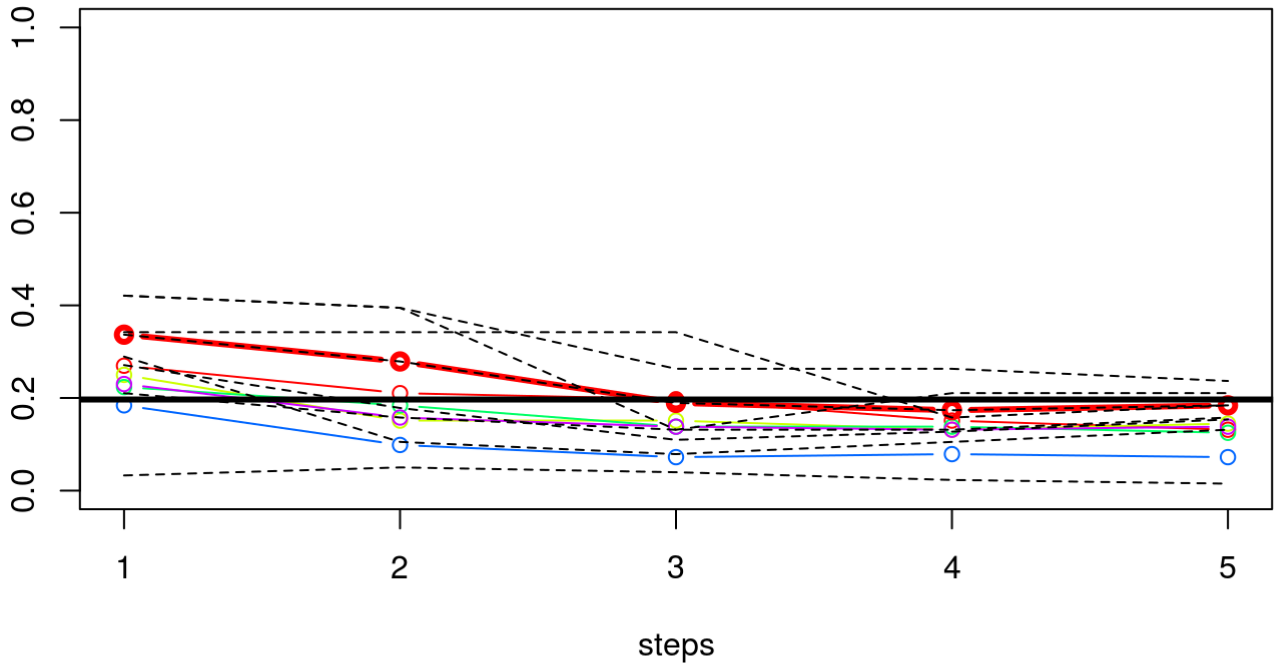

```
## [1] "Alluviale Ablagerung_vs_Moorablagerung"
```



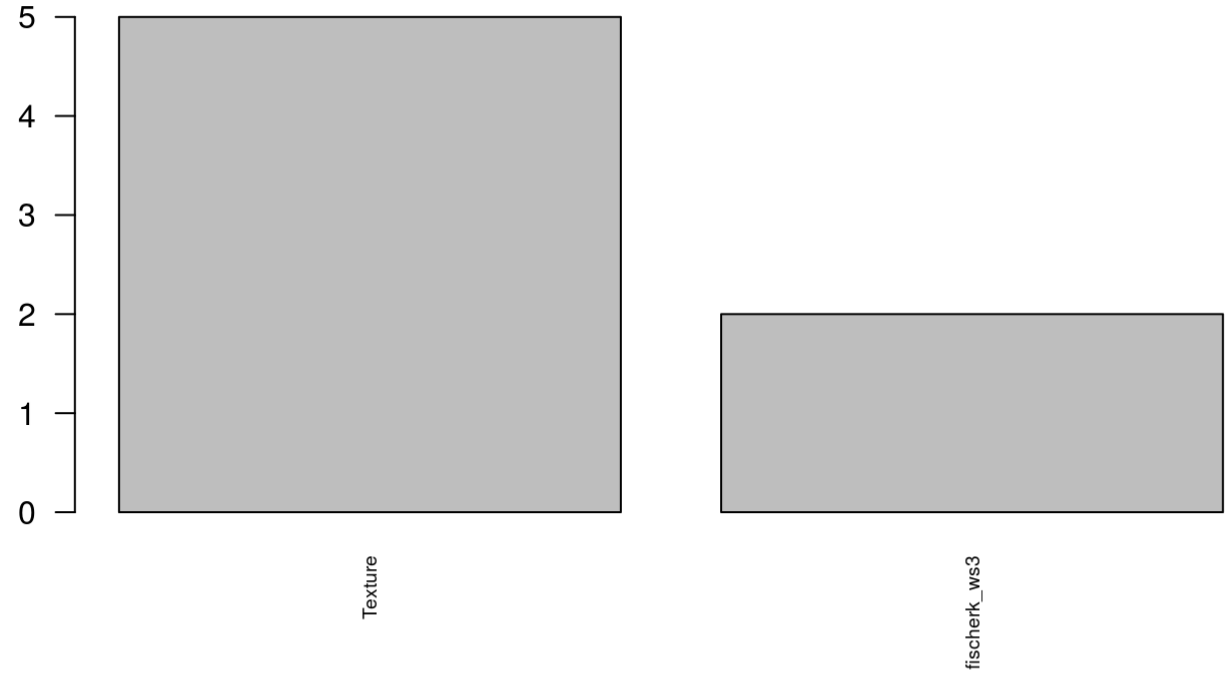
```
## [1] "Prediction error at end is:  0.392773109243697"
## [2] "Prediction error at end is:  0.305714285714286"
## [3] "Prediction error at end is:  0.241512605042017"
## [4] "Prediction error at end is:  0.218823529411765"
## [5] "Prediction error at end is:  0.241848739495798"
##                           k 1                       k 2
## 1               fischerk_ws3             TRI_hr_ws14
## 2              fischerk_ws23 vectorruggedness_hr_ws41
## 3 terraintexture_hr_ws53_tp25                   Texture
## 4     vectorruggedness_hr_ws5            fischerk_ws21
## 5 terraintexture_hr_ws33_tp25            fischerk_ws37
##                           k 3                         k 4
## 1                TRI_hr_ws20                TRI_hr_ws20
## 2    vectorruggedness_hr_ws15                    Texture
## 3                     Texture                fischerk_ws29
## 4     vectorruggedness_hr_ws5 terraintexture_hr_ws57_tp25
## 5 terraintexture_hr_ws57_tp25 terraintexture_hr_ws21_tp25
##                         k 5
## 1 vectorruggedness_hr_ws39
## 2              TRI_hr_ws12
## 3                  Texture
## 4   vectorstrength_hr_ws17
## 5            fischerk_ws57
```



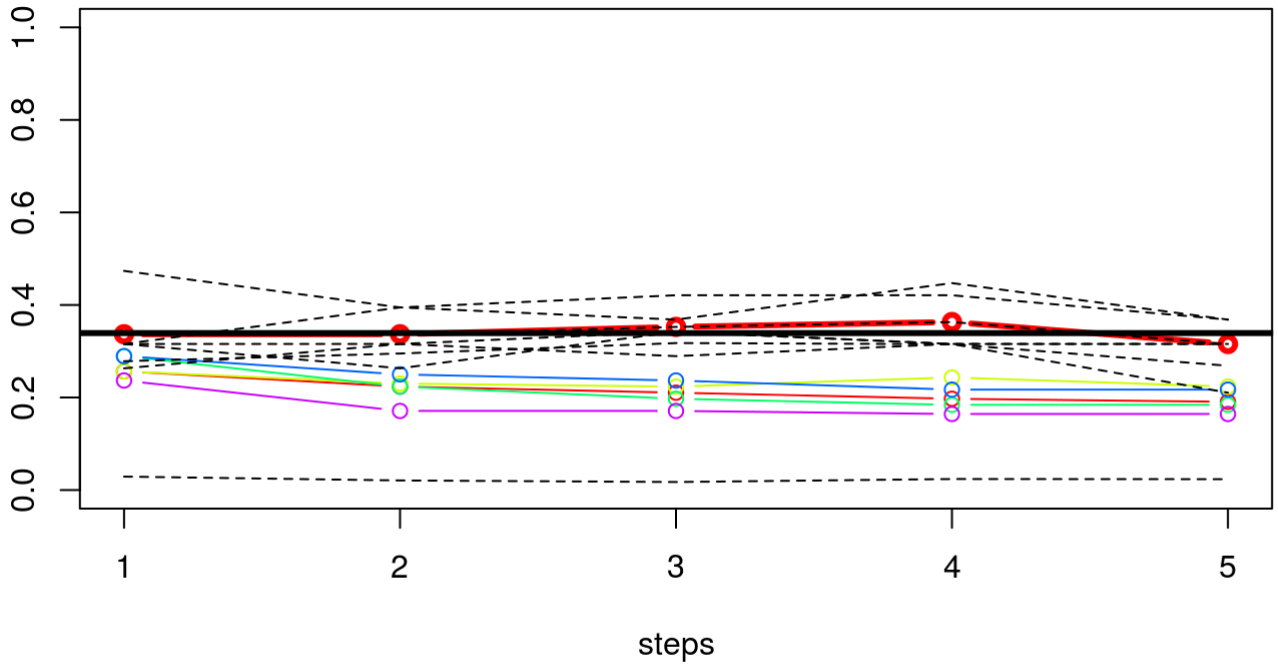

```
## [1] "Alluviale Ablagerung_vs_Glaziolakustrine Ablagerung"
```



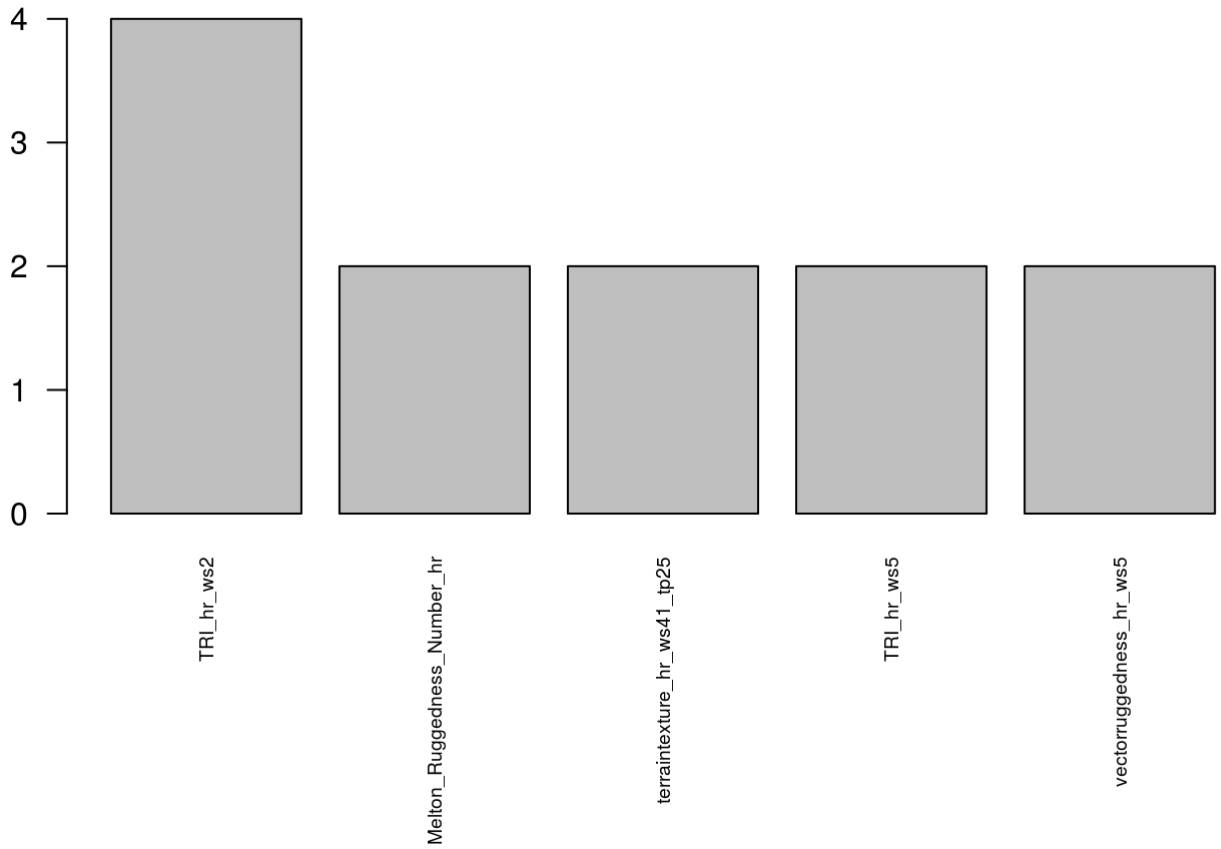

```
## [1] "Prediction error at end is:  0.336842105263158"
## [2] "Prediction error at end is:  0.278947368421053"
## [3] "Prediction error at end is:  0.189473684210526"
## [4] "Prediction error at end is:  0.173684210526316"
## [5] "Prediction error at end is:  0.184210526315789"
##                           k 1                         k 2
## 1               fischerk_ws33                     Texture
## 2                fischerk_ws3                TRI_hr_ws24
## 3                     Texture terraintexture_hr_ws37_tp5
## 4  terraintexture_hr_ws57_tp5      vectorstrength_hr_ws3
## 5 terraintexture_hr_ws57_tp25                fischerk_ws5
##                         k 3                          k 4
## 1 vectorruggedness_hr_ws51                      Texture
## 2            fischerk_ws61                fischerk_ws55
## 3             fischerk_ws7    vectorruggedness_hr_ws45
## 4                  Texture terraintexture_hr_ws53_tp25
## 5            fischerk_ws59                   TRI_hr_ws1
##                        k 5
## 1                  Texture
## 2            TRI_hr_ws25
## 3            TRI_hr_ws18
## 4           fischerk_ws3
## 5 vectorstrength_hr_ws11
```



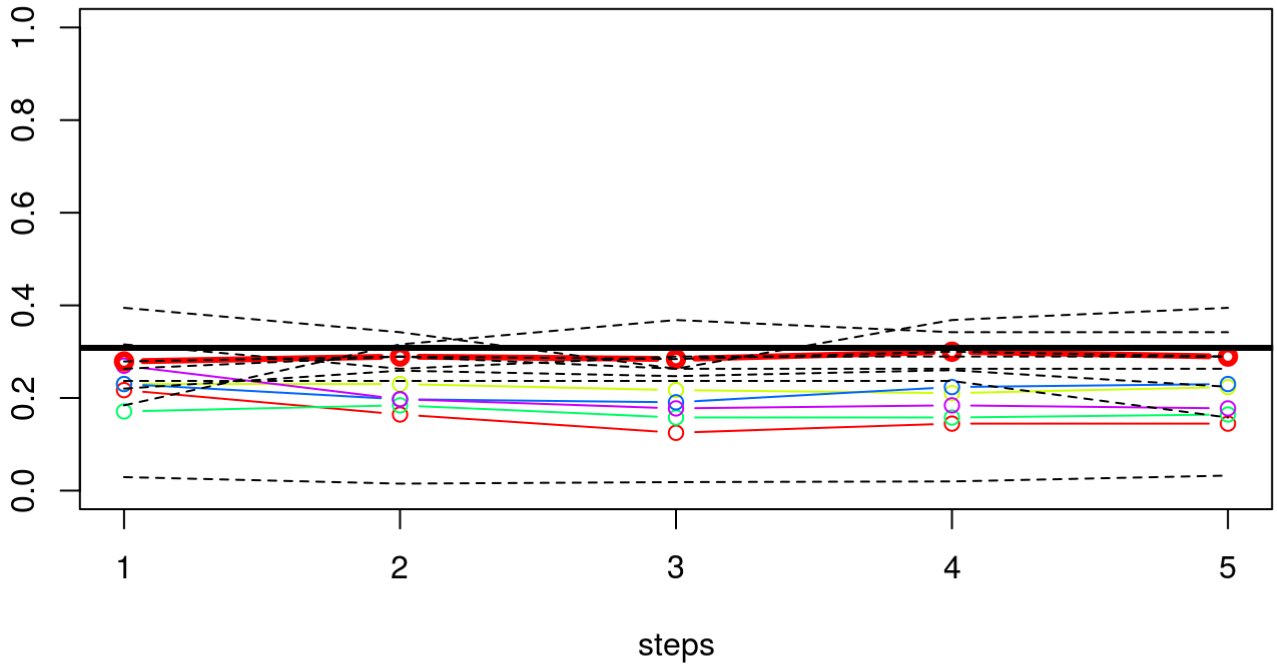

```
## [1] "Alluviale Ablagerung_vs_Grundmoraene"
```



```
## [1] "Prediction error at end is:  0.336842105263158"
## [2] "Prediction error at end is:  0.336842105263158"
## [3] "Prediction error at end is:  0.352631578947368"
## [4] "Prediction error at end is:  0.363157894736842"
## [5] "Prediction error at end is:  0.315789473684211"
##                         k 1                          k 2
## 1 vectorruggedness_hr_ws35                TRI_hr_ws14
## 2              TRI_hr_ws2  terraintexture_hr_ws49_tp5
## 3  vectorruggedness_hr_ws5                 TRI_hr_ws2
## 4 vectorruggedness_hr_ws55 terraintexture_hr_ws41_tp25
## 5   vectorstrength_hr_ws23                TRI_hr_ws12
##                           k 3                          k 4
## 1                TRI_hr_ws15                 TRI_hr_ws5
## 2 terraintexture_hr_ws57_tp25                 TRI_hr_ws2
## 3                 TRI_hr_ws1                TRI_hr_ws20
## 4 terraintexture_hr_ws41_tp25                TRI_hr_ws22
## 5 Melton_Ruggedness_Number_hr Melton_Ruggedness_Number_hr
##                         k 5
## 1              TRI_hr_ws5
## 2  vectorruggedness_hr_ws5
## 3              TRI_hr_ws4
## 4              TRI_hr_ws2
## 5 vectorruggedness_hr_ws11
```

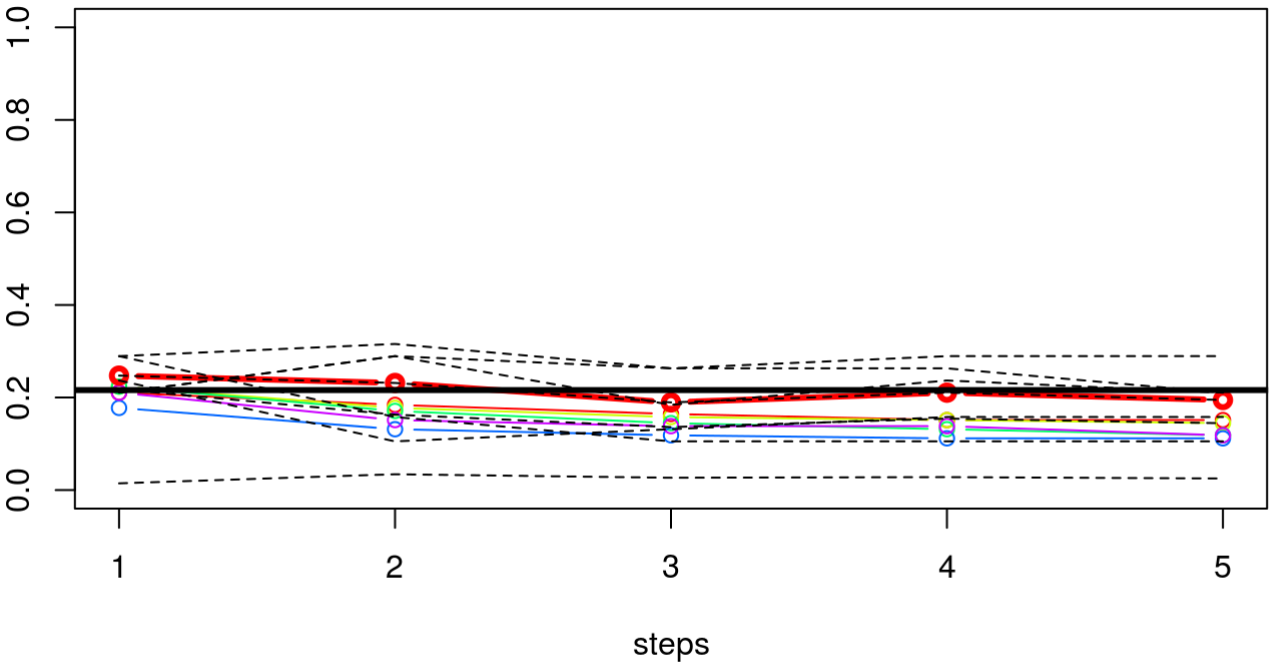



```
## [1] "Alluviale Ablagerung_vs_Moraene undifferenziert"
```

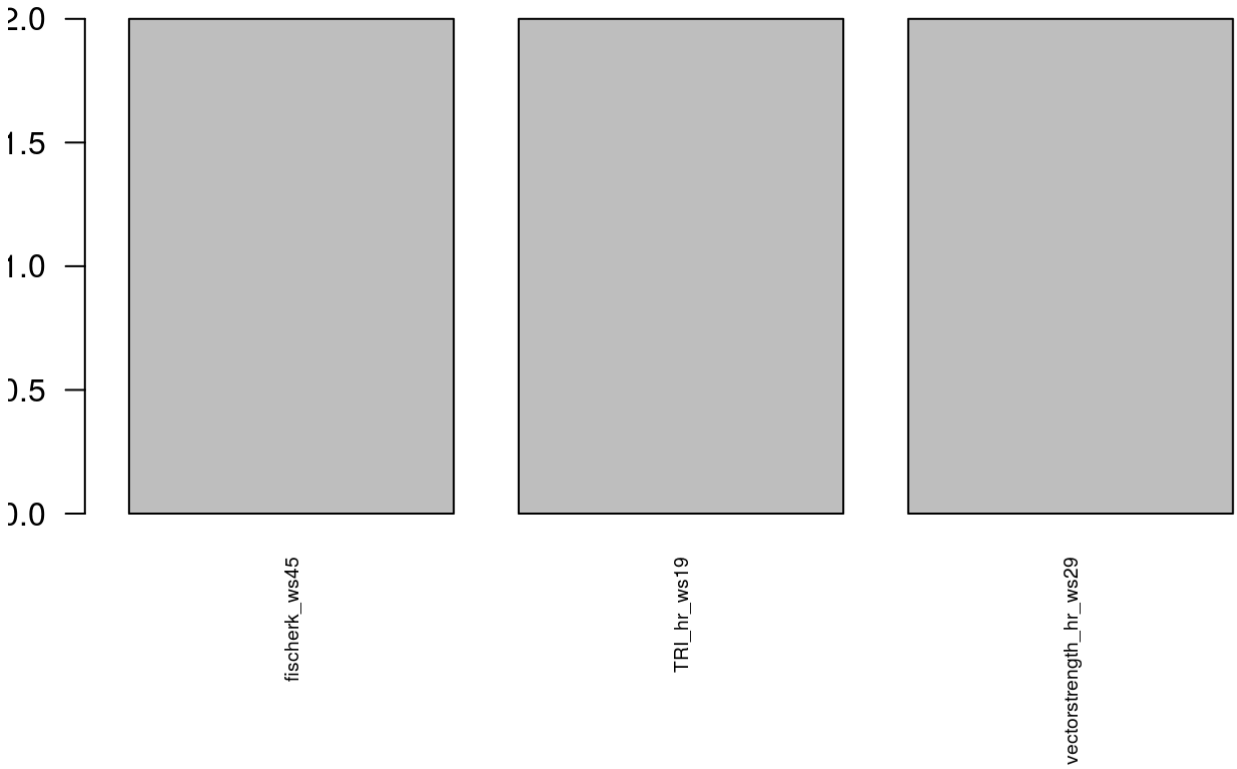



```
## [1] "Prediction error at end is:  0.278947368421053"
## [2] "Prediction error at end is:  0.289473684210526"
## [3] "Prediction error at end is:  0.284210526315789"
## [4] "Prediction error at end is:  0.3"
## [5] "Prediction error at end is:  0.289473684210526"
##                         k 1                          k 2
## 1 vectorruggedness_hr_ws49    vectorruggedness_hr_ws49
## 2   vectorstrength_hr_ws31               fischerk_ws55
## 3            fischerk_ws17      vectorstrength_hr_ws61
## 4            fischerk_ws35 terraintexture_hr_ws21_tp25
## 5   vectorstrength_hr_ws15      vectorstrength_hr_ws57
##                         k 3                          k 4
## 1 vectorruggedness_hr_ws51    vectorruggedness_hr_ws49
## 2 vectorruggedness_hr_ws49    vectorruggedness_hr_ws55
## 3    vectorstrength_hr_ws5 terraintexture_hr_ws29_tp25
## 4              TRI_hr_ws19    vectorruggedness_hr_ws53
## 5 vectorruggedness_hr_ws43    vectorruggedness_hr_ws39
##                       k 5
## 1            TRI_hr_ws13
## 2          fischerk_ws53
## 3 vectorstrength_hr_ws25
## 4 vectorstrength_hr_ws49
## 5             TRI_hr_ws1
```


```
## [1] "Alluviale Ablagerung_vs_gemischte Kegel"
```

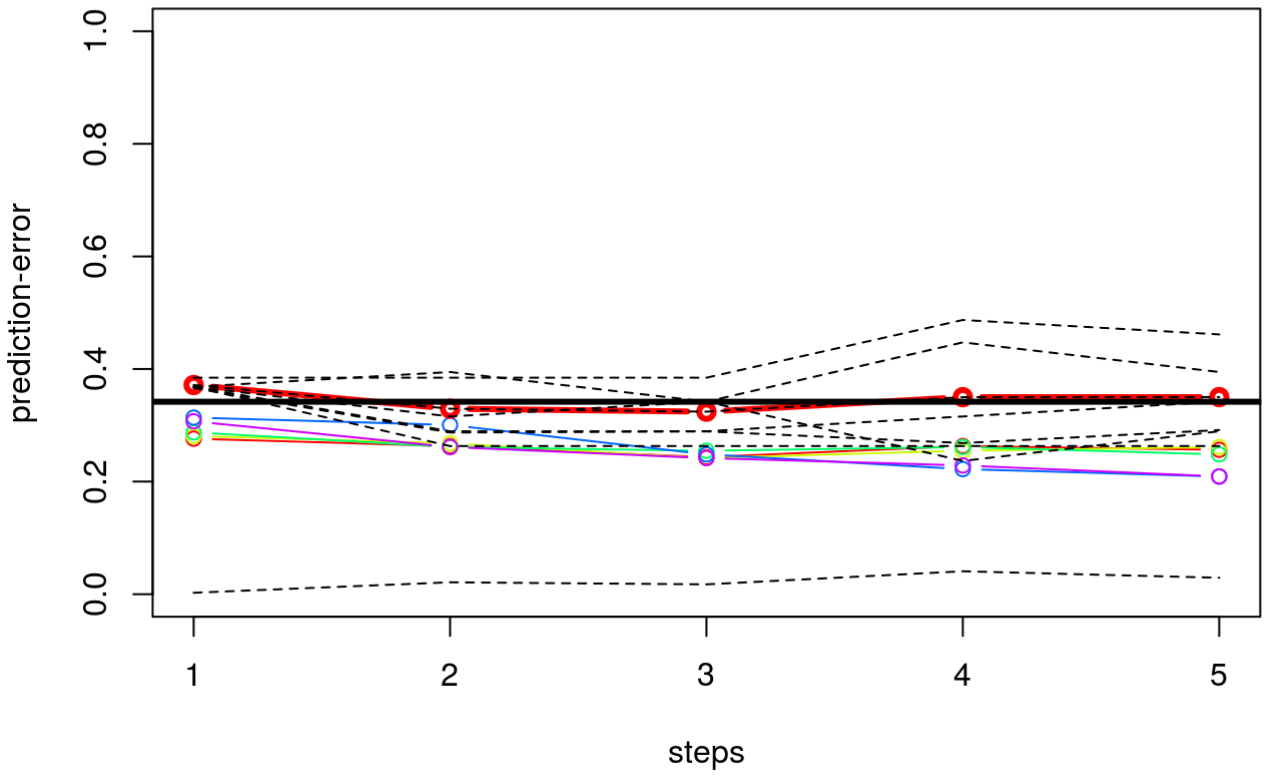


```
## [1] "Prediction error at end is:  0.247368421052632"
## [2] "Prediction error at end is:  0.231578947368421"
## [3] "Prediction error at end is:  0.189473684210526"
## [4] "Prediction error at end is:  0.210526315789474"
## [5] "Prediction error at end is:  0.194736842105263"
##                         k 1                          k 2
## 1              TRI_hr_ws13                TRI_hr_ws19
## 2   vectorstrength_hr_ws29               fischerk_ws45
## 3 vectorruggedness_hr_ws49                TRI_hr_ws10
## 4             fischerk_ws7    vectorruggedness_hr_ws53
## 5            fischerk_ws33 terraintexture_hr_ws25_tp25
##                           k 3                          k 4
## 1                TRI_hr_ws14              fischerk_ws45
## 2 terraintexture_hr_ws49_tp25                 TRI_hr_ws8
## 3      vectorstrength_hr_ws29     vectorstrength_hr_ws45
## 4                     Texture terraintexture_hr_ws53_tp5
## 5 terraintexture_hr_ws57_tp25   vectorruggedness_hr_ws29
##                           k 5
## 1                TRI_hr_ws19
## 2 terraintexture_hr_ws49_tp5
## 3                 TRI_hr_ws6
## 4               fischerk_ws3
## 5                 TRI_hr_ws4
```

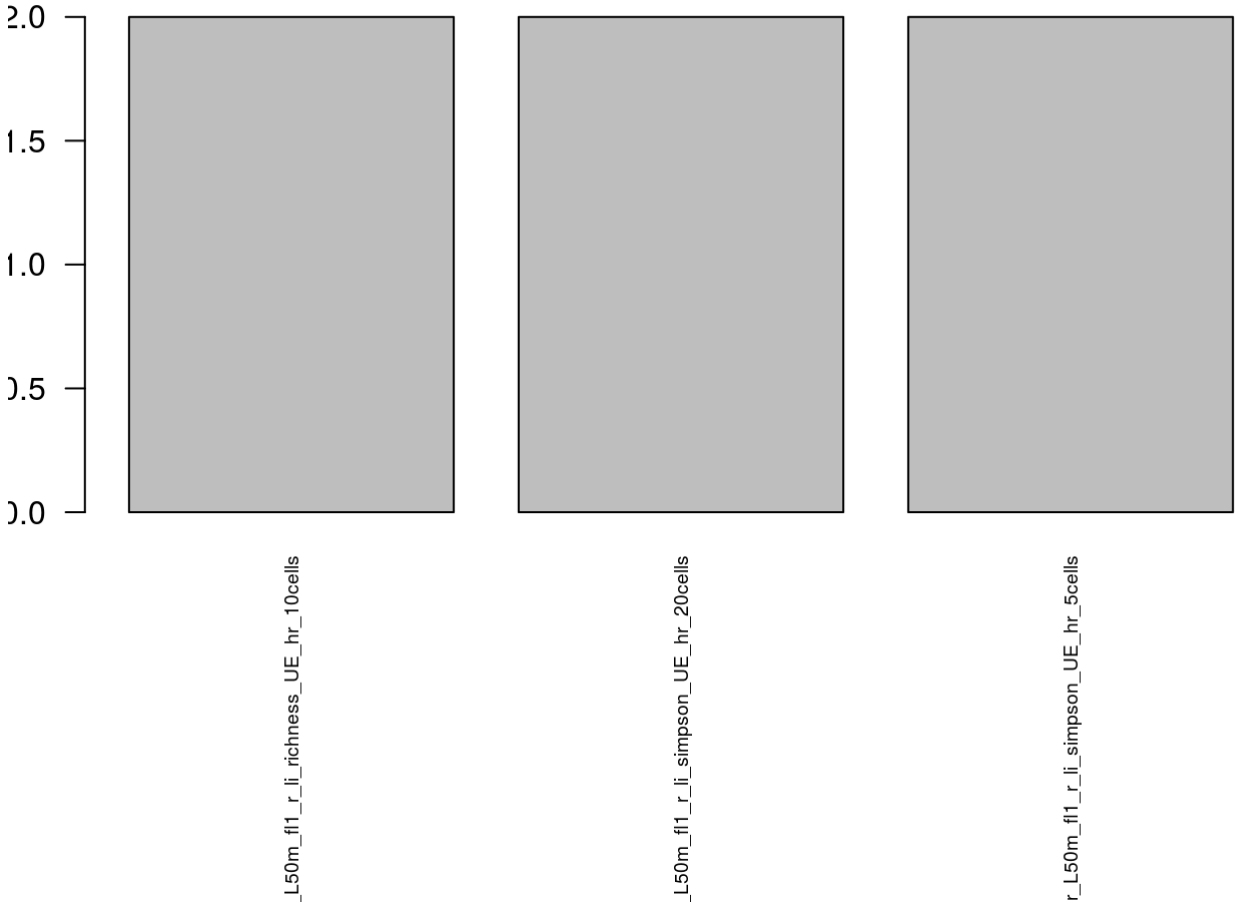


RLIcols

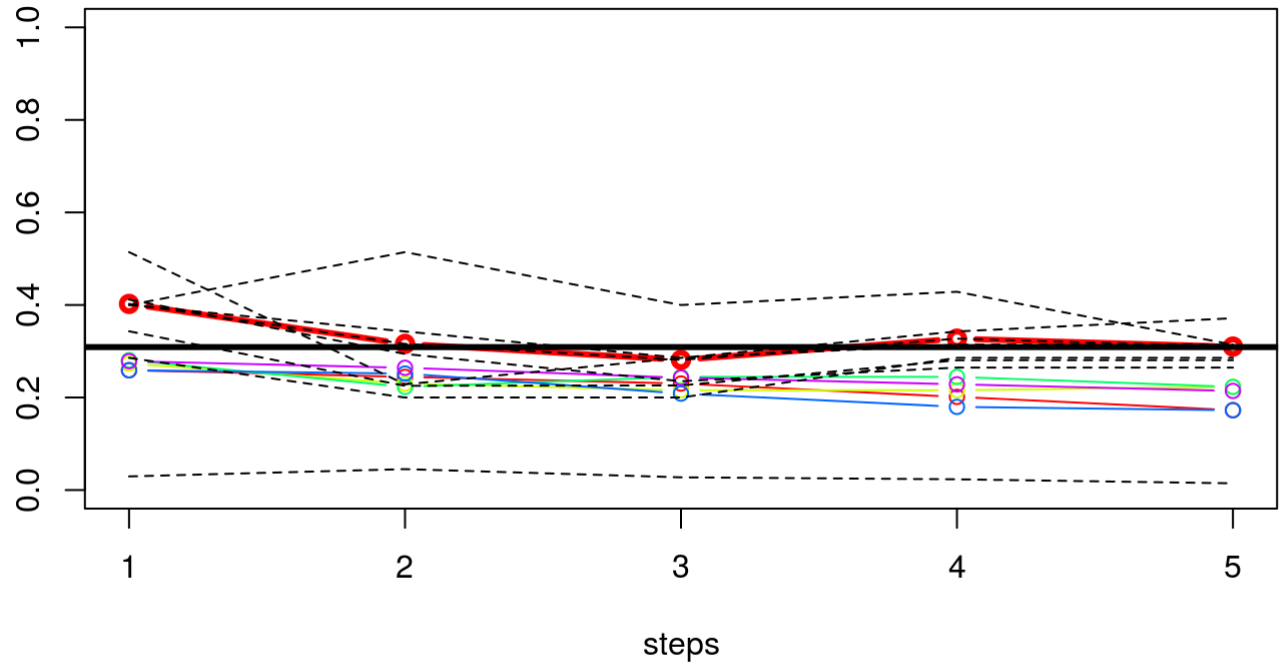
```
## [1] "Alluviale Ablagerung_vs_Kolluvium"
```


prediction-error
0.0
0.2
0.4
0.6
0.8
1.0
1
2
3
4
5
steps

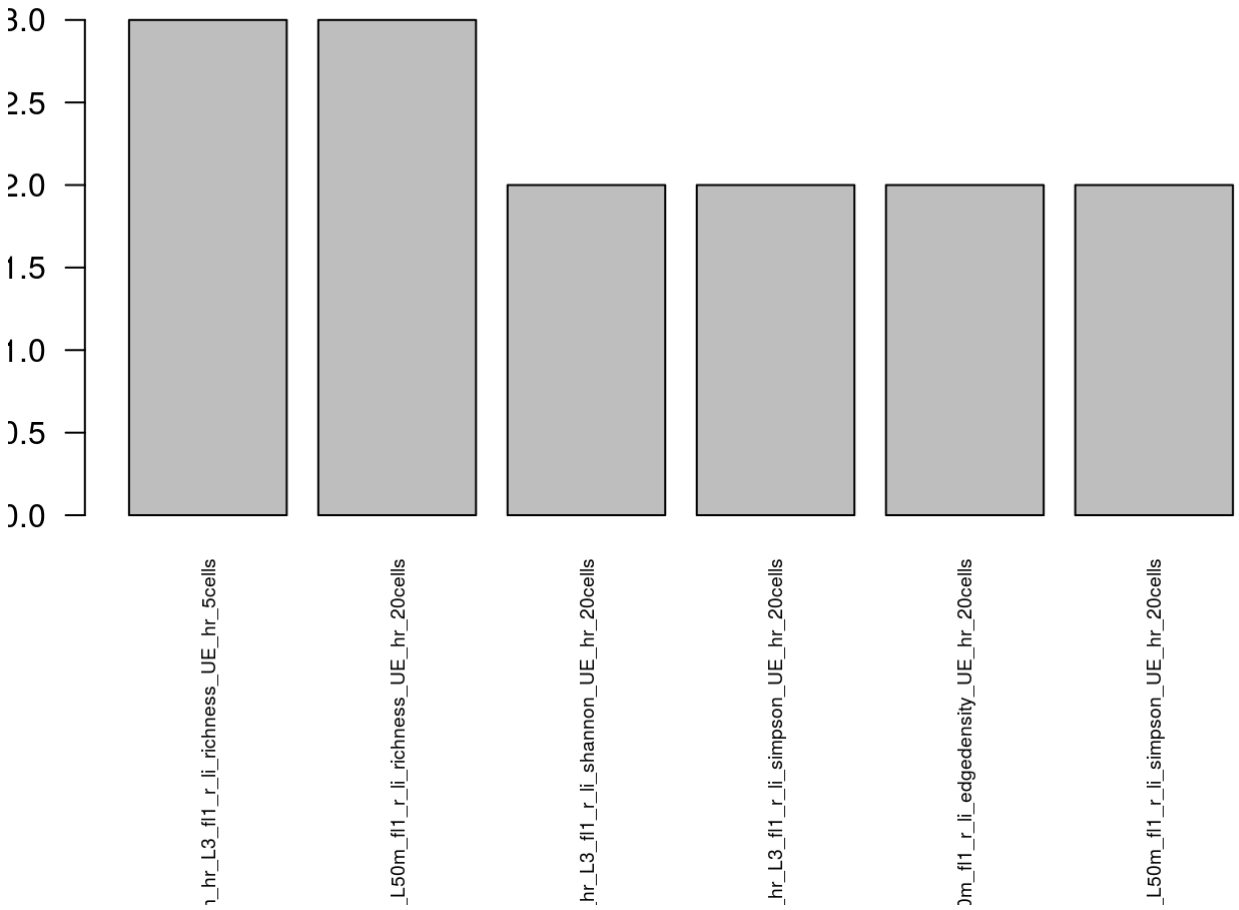
```
## [1] "Prediction error at end is:  0.37165991902834"
## [2] "Prediction error at end is:  0.329554655870445"
## [3] "Prediction error at end is:  0.324291497975708"
## [4] "Prediction error at end is:  0.350067476383266"
## [5] "Prediction error at end is:  0.350202429149798"
##                                                 k 1
## 1      geom_hr_L3_fl10_r_li_richness_UE_hr_20cells
## 2 geom_hr_L50m_fl1_r_li_patchdensity_UE_hr_20cells
## 3          geom_hr_L3_fl1_r_li_shape_UE_hr_10cells
## 4   geom_hr_L3_fl10_r_li_patchdensity_UE_hr_5cells
## 5       geom_hr_L3_fl10_r_li_patchnum_UE_hr_5cells
##                                                  k 2
## 1  geom_hr_L50m_fl10_r_li_edgedensity_UE_hr_20cells
## 2        geom_hr_L50m_fl1_r_li_simpson_UE_hr_5cells
## 3      geom_hr_L50m_fl1_r_li_richness_UE_hr_10cells
## 4            geom_hr_L3_fl10_r_li_mps_UE_hr_10cells
## 5 geom_hr_L50m_fl10_r_li_patchdensity_UE_hr_10cells
##                                                k 3
## 1       geom_hr_L50m_fl10_r_li_mps_UE_hr_20cells
## 2   geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 3           geom_hr_L3_fl1_r_li_mps_UE_hr_5cells
## 4 geom_hr_L3_fl10_r_li_edgedensity_UE_hr_20cells
## 5   geom_hr_L3_fl1_r_li_edgedensity_UE_hr_5cells
##                                                 k 4
## 1     geom_hr_L50m_fl1_r_li_simpson_UE_hr_5cells
## 2         geom_hr_L3_fl10_r_li_mps_UE_hr_20cells
## 3    geom_hr_L50m_fl1_r_li_simpson_UE_hr_20cells
## 4 geom_hr_L3_fl10_r_li_edgedensity_UE_hr_10cells
## 5   geom_hr_L50m_fl1_r_li_richness_UE_hr_10cells
##                                                k 5
## 1 geom_hr_L50m_fl1_r_li_dominance_UE_hr_5cells
## 2   geom_hr_L3_fl10_r_li_simpson_UE_hr_20cells
## 3  geom_hr_L50m_fl1_r_li_simpson_UE_hr_20cells
## 4   geom_hr_L3_fl10_r_li_simpson_UE_hr_10cells
## 5  geom_hr_L3_fl1_r_li_dominance_UE_hr_20cells
```



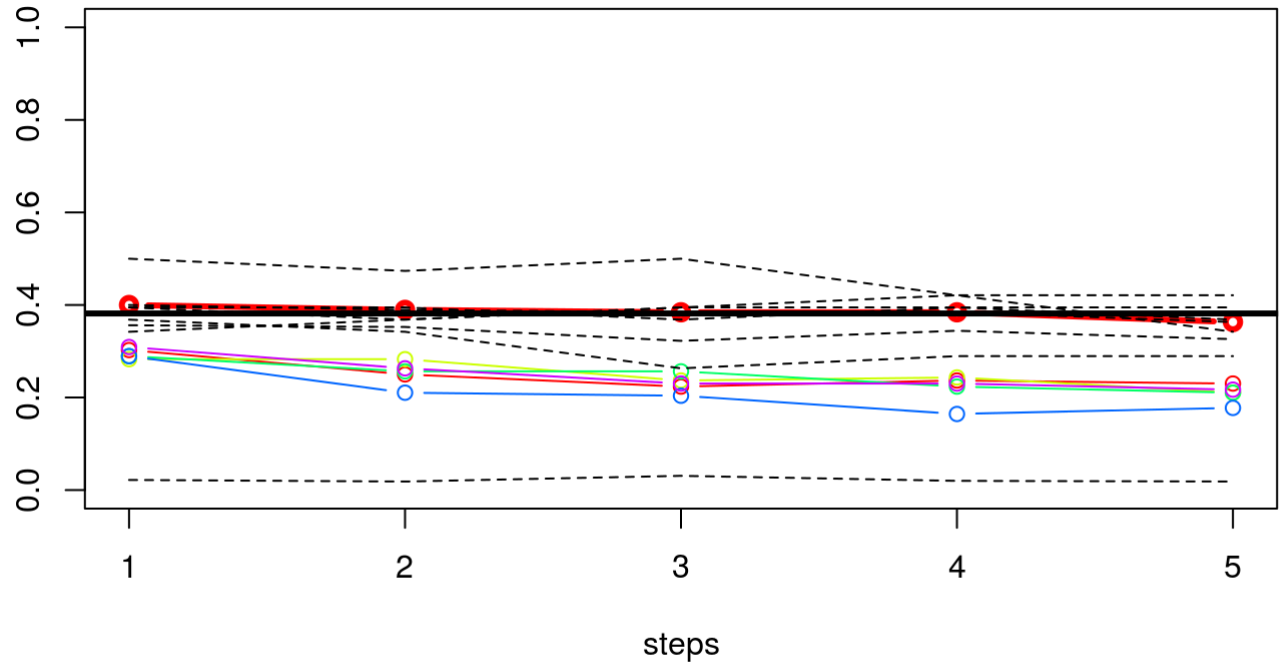

```
## [1] "Alluviale Ablagerung_vs_Moorablagerung"
```



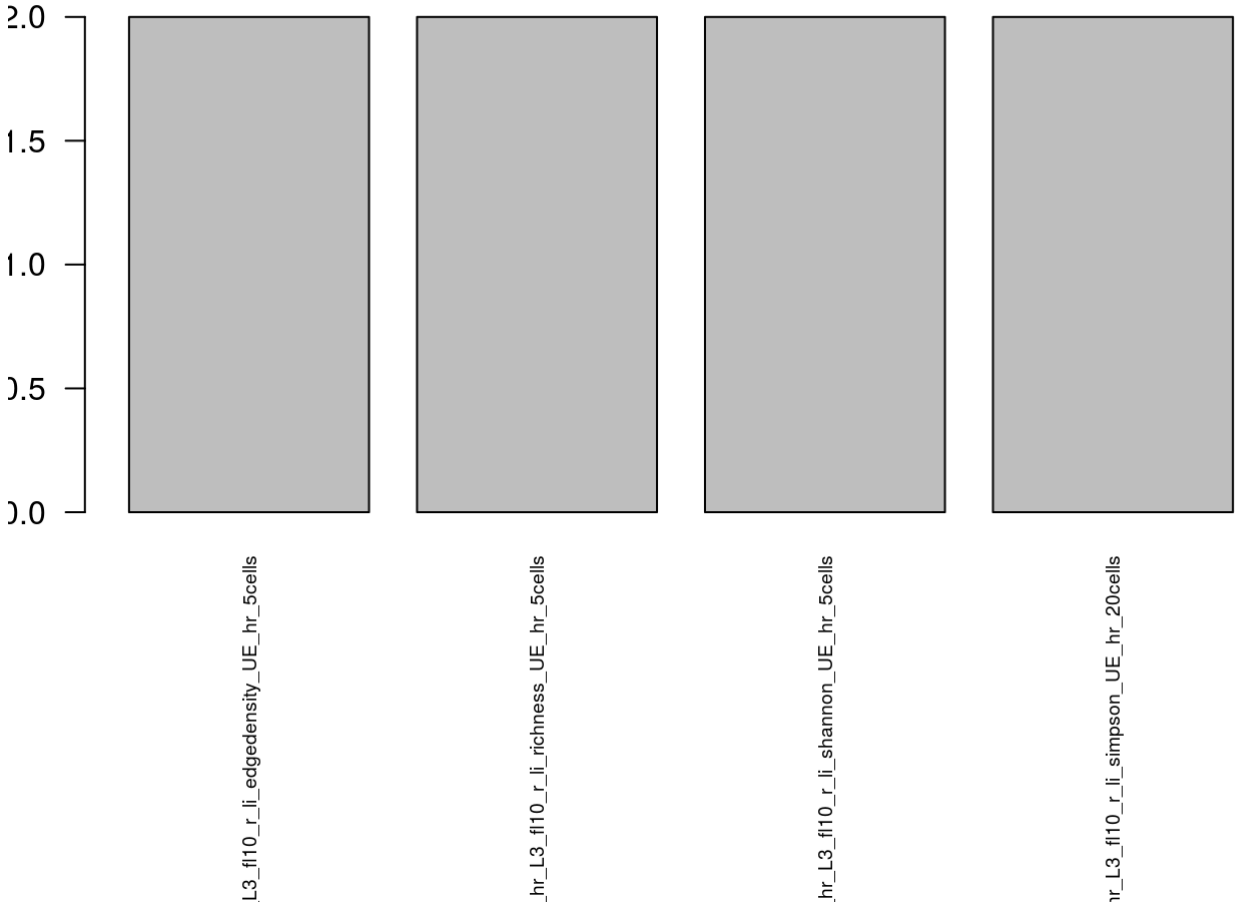
```
## [1] "Prediction error at end is:  0.402352941176471"
## [2] "Prediction error at end is:  0.315966386554622"
## [3] "Prediction error at end is:  0.281344537815126"
## [4] "Prediction error at end is:  0.327226890756303"
## [5] "Prediction error at end is:  0.310084033613445"
##                                                 k 1
## 1    geom_hr_L50m_fl1_r_li_richness_UE_hr_10cells
## 2   geom_hr_L50m_fl1_r_li_dominance_UE_hr_10cells
## 3       geom_hr_L3_fl1_r_li_shannon_UE_hr_20cells
## 4       geom_hr_L3_fl1_r_li_richness_UE_hr_5cells
## 5 geom_hr_L50m_fl1_r_li_edgedensity_UE_hr_20cells
##                                                  k 2
## 1     geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 2      geom_hr_L50m_fl1_r_li_simpson_UE_hr_20cells
## 3 geom_hr_L50m_fl1_r_li_patchdensity_UE_hr_20cells
## 4             geom_hr_L3_fl1_r_li_mps_UE_hr_5cells
## 5        geom_hr_L3_fl1_r_li_shannon_UE_hr_10cells
##                                                 k 3
## 1 geom_hr_L50m_fl1_r_li_edgedensity_UE_hr_20cells
## 2       geom_hr_L3_fl1_r_li_richness_UE_hr_5cells
## 3       geom_hr_L50m_fl1_r_li_shape_UE_hr_20cells
## 4 geom_hr_L50m_fl1_r_li_edgedensity_UE_hr_10cells
## 5    geom_hr_L3_fl1_r_li_edgedensity_UE_hr_5cells
##                                                k 4
## 1 geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 2    geom_hr_L3_fl1_r_li_simpson_UE_hr_20cells
## 3    geom_hr_L3_fl1_r_li_richness_UE_hr_5cells
## 4   geom_hr_L3_fl10_r_li_simpson_UE_hr_20cells
## 5 geom_hr_L3_fl10_r_li_dominance_UE_hr_10cells
##                                                 k 5
## 1    geom_hr_L50m_fl1_r_li_simpson_UE_hr_20cells
## 2   geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 3      geom_hr_L3_fl1_r_li_simpson_UE_hr_20cells
## 4      geom_hr_L3_fl1_r_li_shannon_UE_hr_20cells
## 5 geom_hr_L50m_fl10_r_li_dominance_UE_hr_20cells
```



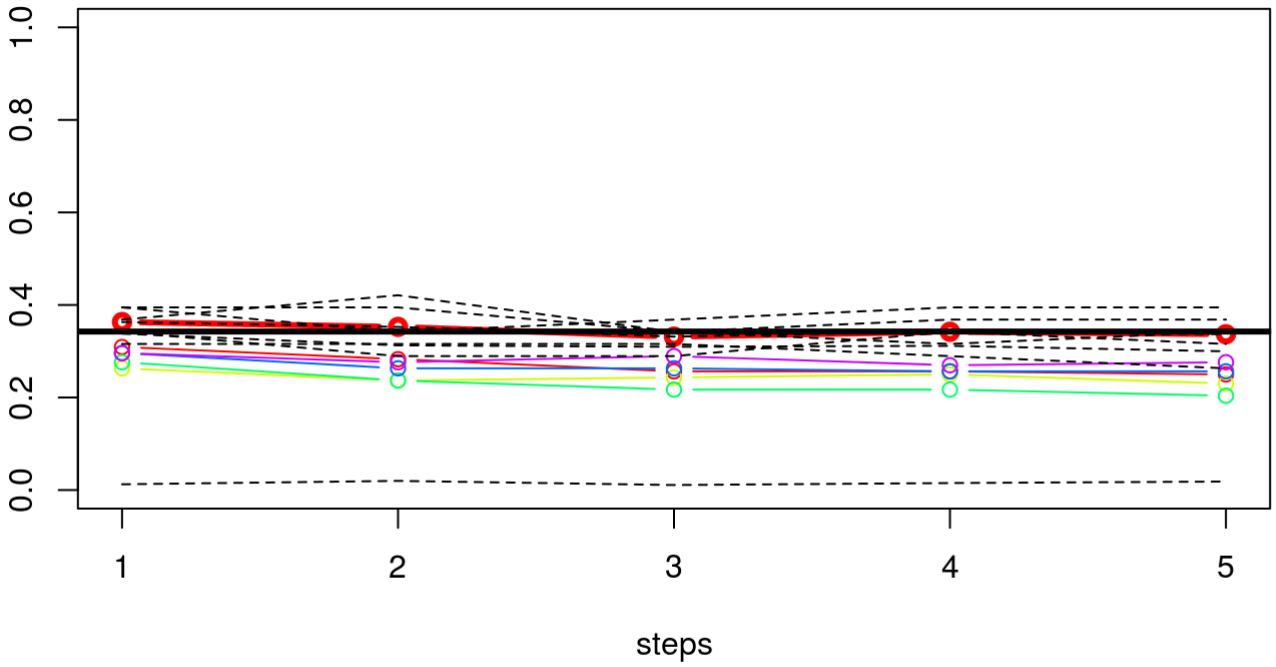

```
## [1] "Alluviale Ablagerung_vs_Glaziolakustrine Ablagerung"
```



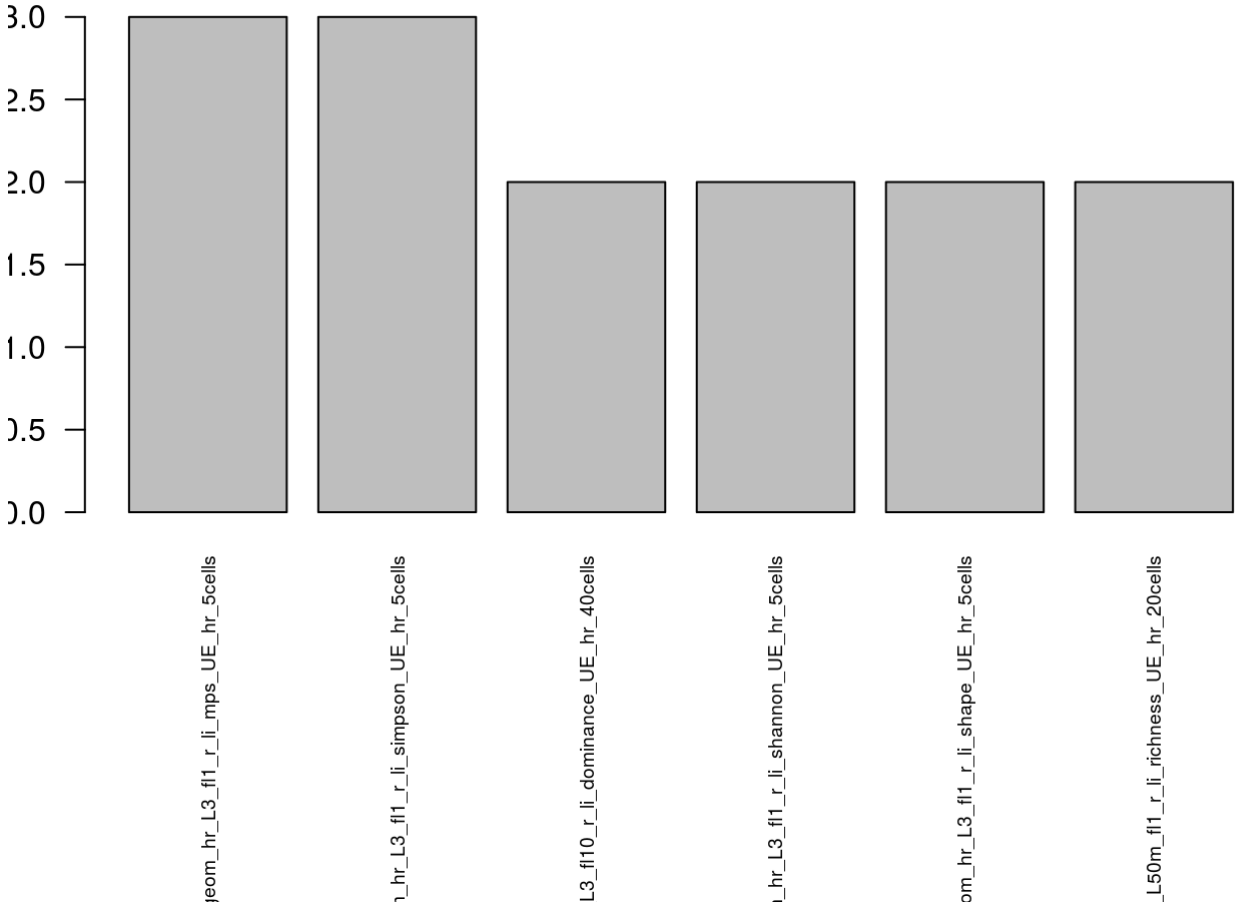
```
## [1] "Prediction error at end is:  0.4"
## [2] "Prediction error at end is:  0.389473684210526"
## [3] "Prediction error at end is:  0.384210526315789"
## [4] "Prediction error at end is:  0.384210526315789"
## [5] "Prediction error at end is:  0.363157894736842"
##                                                 k 1
## 1  geom_hr_L50m_fl10_r_li_richness_UE_hr_10cells
## 2     geom_hr_L3_fl10_r_li_richness_UE_hr_5cells
## 3      geom_hr_L50m_fl1_r_li_shape_UE_hr_10cells
## 4 geom_hr_L3_fl10_r_li_edgedensity_UE_hr_10cells
## 5      geom_hr_L3_fl10_r_li_shannon_UE_hr_5cells
##                                                 k 2
## 1 geom_hr_L50m_fl10_r_li_richness_UE_hr_20cells
## 2 geom_hr_L3_fl10_r_li_edgedensity_UE_hr_5cells
## 3 geom_hr_L50m_fl1_r_li_dominance_UE_hr_20cells
## 4     geom_hr_L3_fl10_r_li_shannon_UE_hr_5cells
## 5       geom_hr_L3_fl10_r_li_shape_UE_hr_5cells
##                                                  k 3
## 1         geom_hr_L50m_fl1_r_li_mps_UE_hr_10cells
## 2           geom_hr_L3_fl10_r_li_mps_UE_hr_5cells
## 3     geom_hr_L50m_fl1_r_li_shannon_UE_hr_20cells
## 4 geom_hr_L3_fl10_r_li_patchdensity_UE_hr_10cells
## 5        geom_hr_L3_fl10_r_li_shape_UE_hr_10cells
##                                                 k 4
## 1   geom_hr_L3_fl10_r_li_simpson_UE_hr_20cells
## 2 geom_hr_L50m_fl10_r_li_shannon_UE_hr_10cells
## 3      geom_hr_L50m_fl10_r_li_mps_UE_hr_5cells
## 4       geom_hr_L3_fl1_r_li_shape_UE_hr_5cells
## 5   geom_hr_L3_fl10_r_li_richness_UE_hr_5cells
##                                                 k 5
## 1     geom_hr_L3_fl10_r_li_simpson_UE_hr_20cells
## 2           geom_hr_L3_fl1_r_li_mps_UE_hr_5cells
## 3 geom_hr_L3_fl10_r_li_edgedensity_UE_hr_20cells
## 4   geom_hr_L3_fl1_r_li_edgedensity_UE_hr_5cells
## 5  geom_hr_L3_fl10_r_li_edgedensity_UE_hr_5cells
```



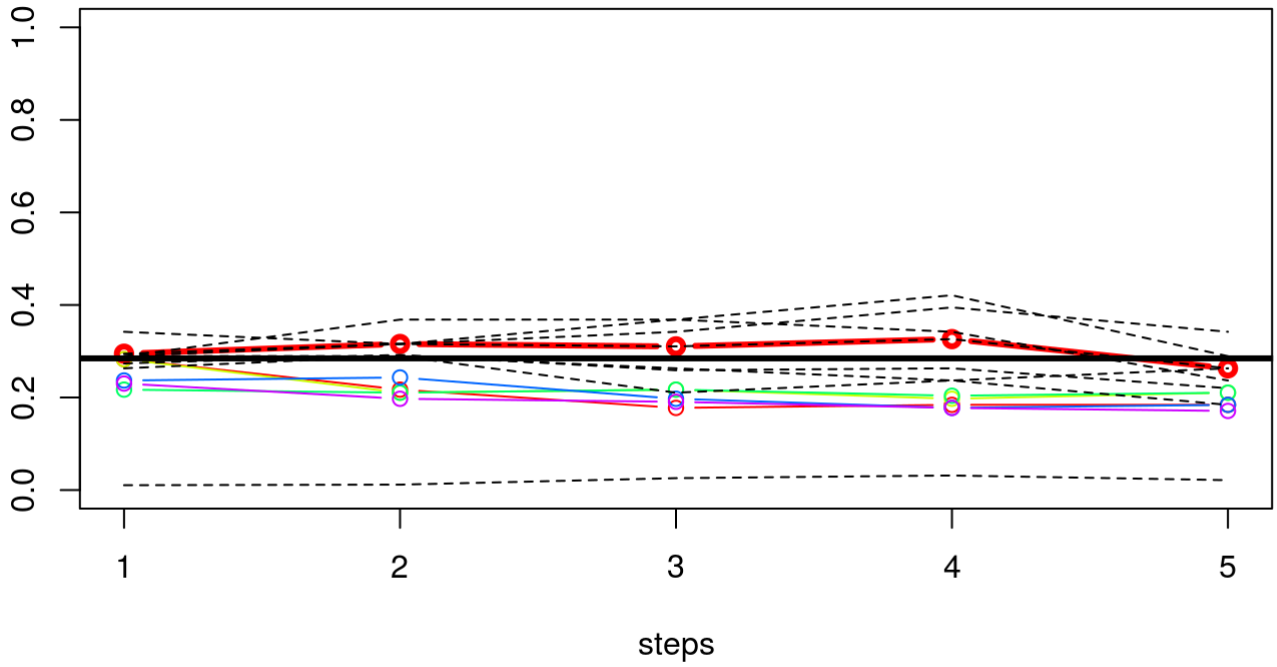

```
## [1] "Alluviale Ablagerung_vs_Grundmoraene"
```



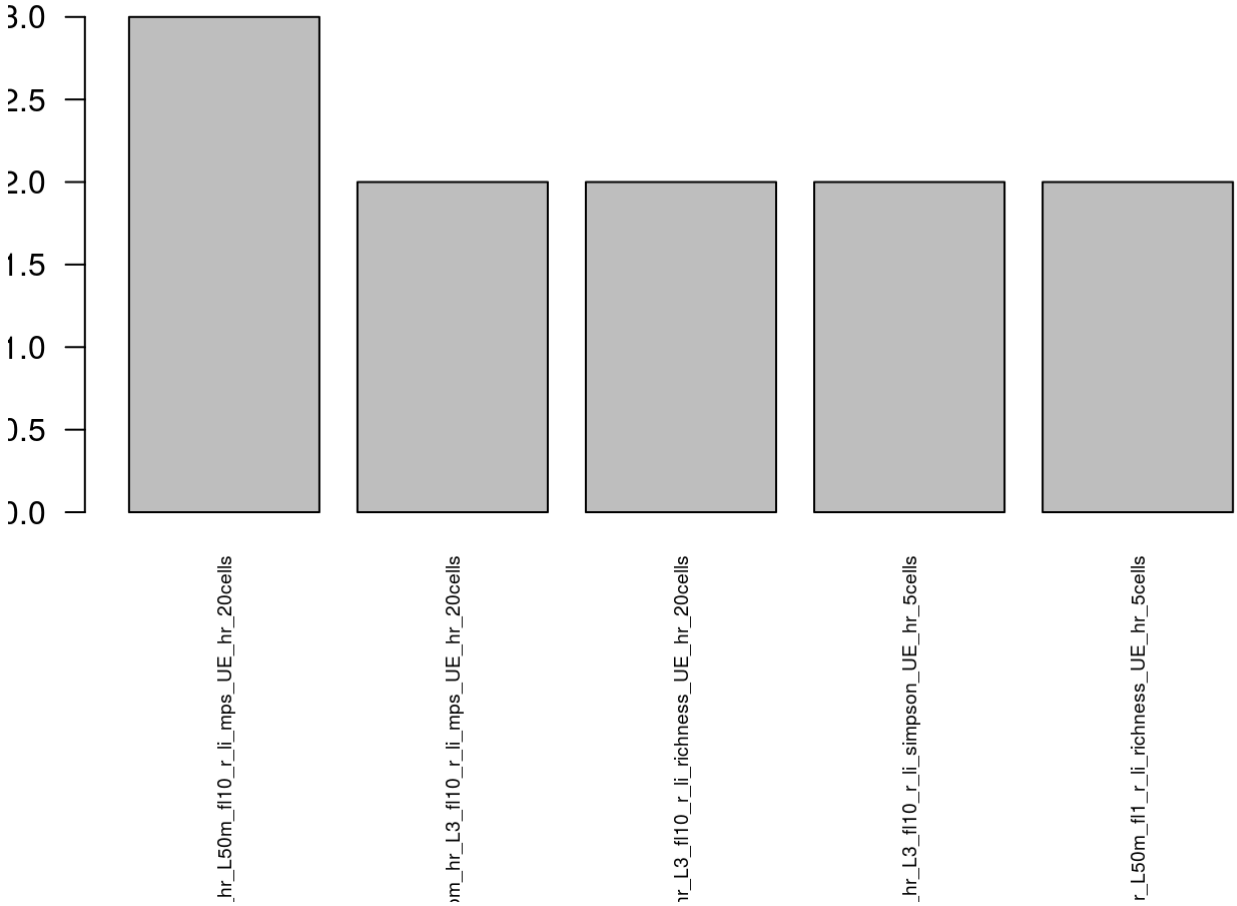
```
## [1] "Prediction error at end is:  0.363157894736842"
## [2] "Prediction error at end is:  0.352631578947368"
## [3] "Prediction error at end is:  0.331578947368421"
## [4] "Prediction error at end is:  0.342105263157895"
## [5] "Prediction error at end is:  0.336842105263158"
##                                                 k 1
## 1      geom_hr_L3_fl1_r_li_simpson_UE_hr_5cells
## 2 geom_hr_L50m_fl1_r_li_dominance_UE_hr_20cells
## 3  geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 4   geom_hr_L3_fl10_r_li_dominance_UE_hr_5cells
## 5          geom_hr_L3_fl1_r_li_mps_UE_hr_5cells
##                                                   k 2
## 1         geom_hr_L3_fl1_r_li_simpson_UE_hr_5cells
## 2         geom_hr_L3_fl1_r_li_shannon_UE_hr_5cells
## 3 geom_hr_L50m_fl1_r_li_patchdensity_UE_hr_20cells
## 4     geom_hr_L3_fl10_r_li_dominance_UE_hr_40cells
## 5           geom_hr_L3_fl1_r_li_shape_UE_hr_5cells
##                                                    k 3
## 1           geom_hr_L3_fl1_r_li_mps_UE_hr_5cells
## 2   geom_hr_L3_fl10_r_li_dominance_UE_hr_40cells
## 3 geom_hr_L50m_fl10_r_li_dominance_UE_hr_20cells
## 4  geom_hr_L3_fl1_r_li_patchdensity_UE_hr_5cells
## 5         geom_hr_L3_fl1_r_li_shape_UE_hr_5cells
##                                                     k 4
## 1          geom_hr_L3_fl1_r_li_shannon_UE_hr_5cells
## 2              geom_hr_L3_fl1_r_li_mps_UE_hr_5cells
## 3      geom_hr_L50m_fl10_r_li_shannon_UE_hr_10cells
## 4 geom_hr_L50m_fl10_r_li_patchdensity_UE_hr_10cells
## 5       geom_hr_L3_fl10_r_li_richness_UE_hr_10cells
##                                                 k 5
## 1 geom_hr_L50m_fl1_r_li_richness_UE_hr_10cells
## 2 geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 3     geom_hr_L3_fl1_r_li_simpson_UE_hr_5cells
## 4  geom_hr_L3_fl1_r_li_dominance_UE_hr_10cells
## 5      geom_hr_L50m_fl1_r_li_mps_UE_hr_20cells
```



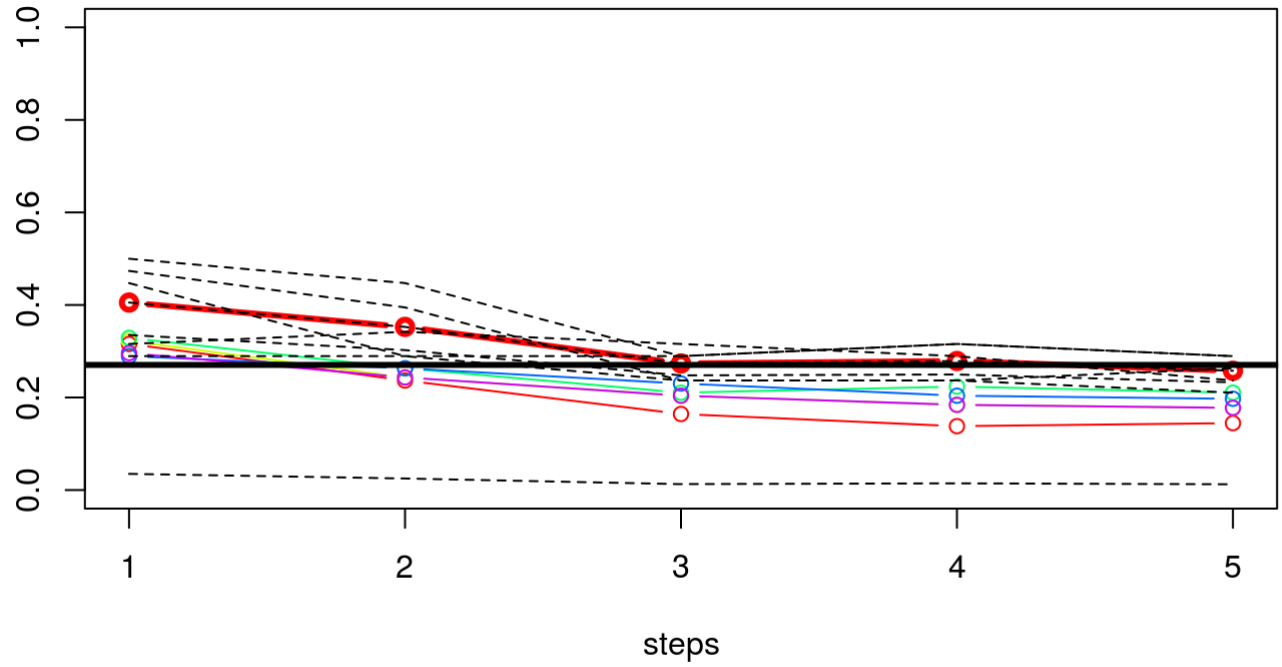

```
## [1] "Alluviale Ablagerung_vs_Moraene undifferenziert"
```



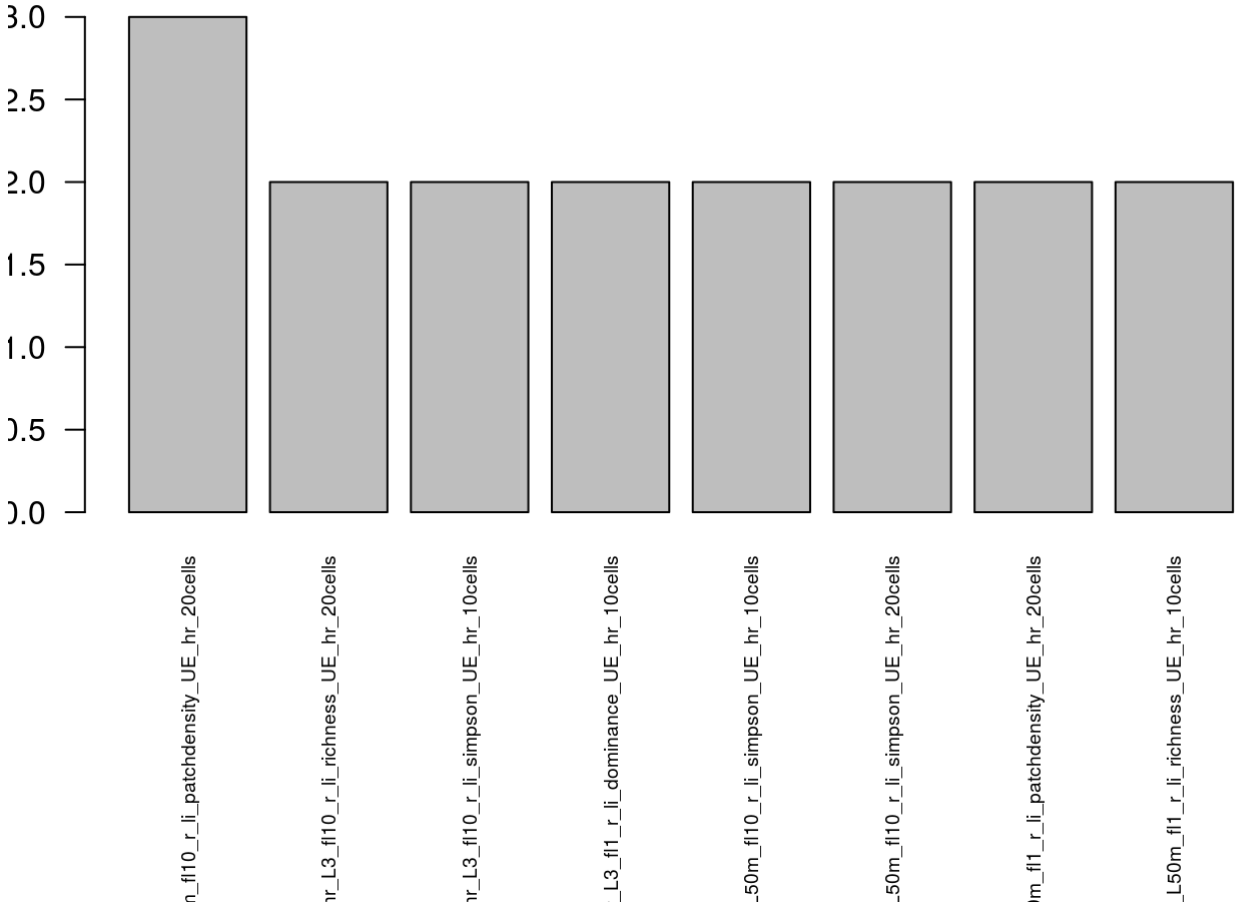
```
## [1] "Prediction error at end is:  0.294736842105263"
## [2] "Prediction error at end is:  0.315789473684211"
## [3] "Prediction error at end is:  0.310526315789474"
## [4] "Prediction error at end is:  0.326315789473684"
## [5] "Prediction error at end is:  0.263157894736842"
##                                                 k 1
## 1    geom_hr_L3_fl10_r_li_richness_UE_hr_20cells
## 2    geom_hr_L50m_fl1_r_li_simpson_UE_hr_10cells
## 3 geom_hr_L3_fl10_r_li_patchdensity_UE_hr_5cells
## 4         geom_hr_L3_fl10_r_li_mps_UE_hr_20cells
## 5      geom_hr_L3_fl10_r_li_simpson_UE_hr_5cells
##                                                 k 2
## 1     geom_hr_L3_fl10_r_li_shannon_UE_hr_10cells
## 2 geom_hr_L3_fl10_r_li_edgedensity_UE_hr_20cells
## 3      geom_hr_L3_fl1_r_li_simpson_UE_hr_10cells
## 4   geom_hr_L3_fl10_r_li_dominance_UE_hr_20cells
## 5      geom_hr_L3_fl10_r_li_simpson_UE_hr_5cells
##                                                   k 3
## 1 geom_hr_L50m_fl10_r_li_patchdensity_UE_hr_20cells
## 2          geom_hr_L50m_fl10_r_li_mps_UE_hr_20cells
## 3     geom_hr_L50m_fl10_r_li_patchnum_UE_hr_20cells
## 4       geom_hr_L3_fl10_r_li_richness_UE_hr_20cells
## 5      geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
##                                                 k 4
## 1     geom_hr_L50m_fl10_r_li_mps_UE_hr_20cells
## 2      geom_hr_L50m_fl1_r_li_mps_UE_hr_20cells
## 3  geom_hr_L50m_fl1_r_li_richness_UE_hr_5cells
## 4 geom_hr_L50m_fl1_r_li_dominance_UE_hr_5cells
## 5       geom_hr_L3_fl10_r_li_mps_UE_hr_20cells
##                                                 k 5
## 1         geom_hr_L50m_fl10_r_li_mps_UE_hr_20cells
## 2  geom_hr_L3_fl10_r_li_patchdensity_UE_hr_20cells
## 3           geom_hr_L3_fl10_r_li_mps_UE_hr_10cells
## 4 geom_hr_L50m_fl1_r_li_patchdensity_UE_hr_20cells
## 5      geom_hr_L50m_fl1_r_li_richness_UE_hr_5cells
```




```
## [1] "Alluviale Ablagerung_vs_gemischte Kegel"
```

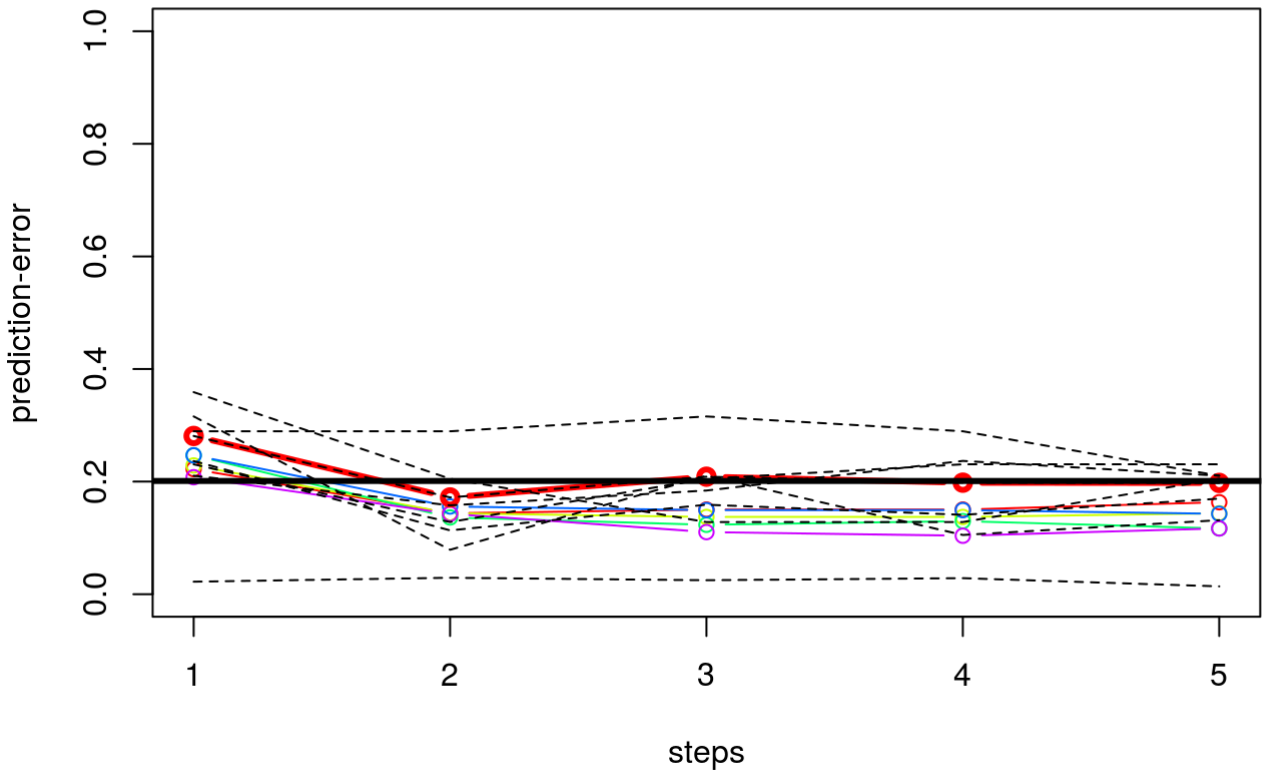


```
## [1] "Prediction error at end is:  0.405263157894737"
## [2] "Prediction error at end is:  0.352631578947368"
## [3] "Prediction error at end is:  0.273684210526316"
## [4] "Prediction error at end is:  0.278947368421053"
## [5] "Prediction error at end is:  0.257894736842105"
##                                                  k 1
## 1      geom_hr_L50m_fl1_r_li_richness_UE_hr_10cells
## 2       geom_hr_L3_fl1_r_li_dominance_UE_hr_10cells
## 3      geom_hr_L50m_fl10_r_li_simpson_UE_hr_10cells
## 4 geom_hr_L50m_fl10_r_li_patchdensity_UE_hr_20cells
## 5        geom_hr_L3_fl10_r_li_simpson_UE_hr_10cells
##                                                 k 2
## 1   geom_hr_L50m_fl1_r_li_richness_UE_hr_10cells
## 2 geom_hr_L50m_fl10_r_li_dominance_UE_hr_20cells
## 3     geom_hr_L3_fl10_r_li_simpson_UE_hr_10cells
## 4     geom_hr_L50m_fl1_r_li_shannon_UE_hr_5cells
## 5   geom_hr_L50m_fl10_r_li_simpson_UE_hr_20cells
##                                                  k 3
## 1    geom_hr_L3_fl10_r_li_edgedensity_UE_hr_20cells
## 2           geom_hr_L3_fl10_r_li_shape_UE_hr_5cells
## 3  geom_hr_L50m_fl1_r_li_patchdensity_UE_hr_20cells
## 4 geom_hr_L50m_fl10_r_li_patchdensity_UE_hr_20cells
## 5       geom_hr_L3_fl10_r_li_richness_UE_hr_20cells
##                                                  k 4
## 1      geom_hr_L50m_fl1_r_li_richness_UE_hr_20cells
## 2       geom_hr_L3_fl10_r_li_richness_UE_hr_20cells
## 3 geom_hr_L50m_fl10_r_li_patchdensity_UE_hr_20cells
## 4      geom_hr_L50m_fl10_r_li_simpson_UE_hr_20cells
## 5          geom_hr_L50m_fl10_r_li_mps_UE_hr_10cells
##                                                 k 5
## 1       geom_hr_L3_fl10_r_li_simpson_UE_hr_20cells
## 2      geom_hr_L3_fl1_r_li_dominance_UE_hr_10cells
## 3 geom_hr_L50m_fl1_r_li_patchdensity_UE_hr_20cells
## 4     geom_hr_L3_fl10_r_li_dominance_UE_hr_40cells
## 5     geom_hr_L50m_fl10_r_li_simpson_UE_hr_10cells
```

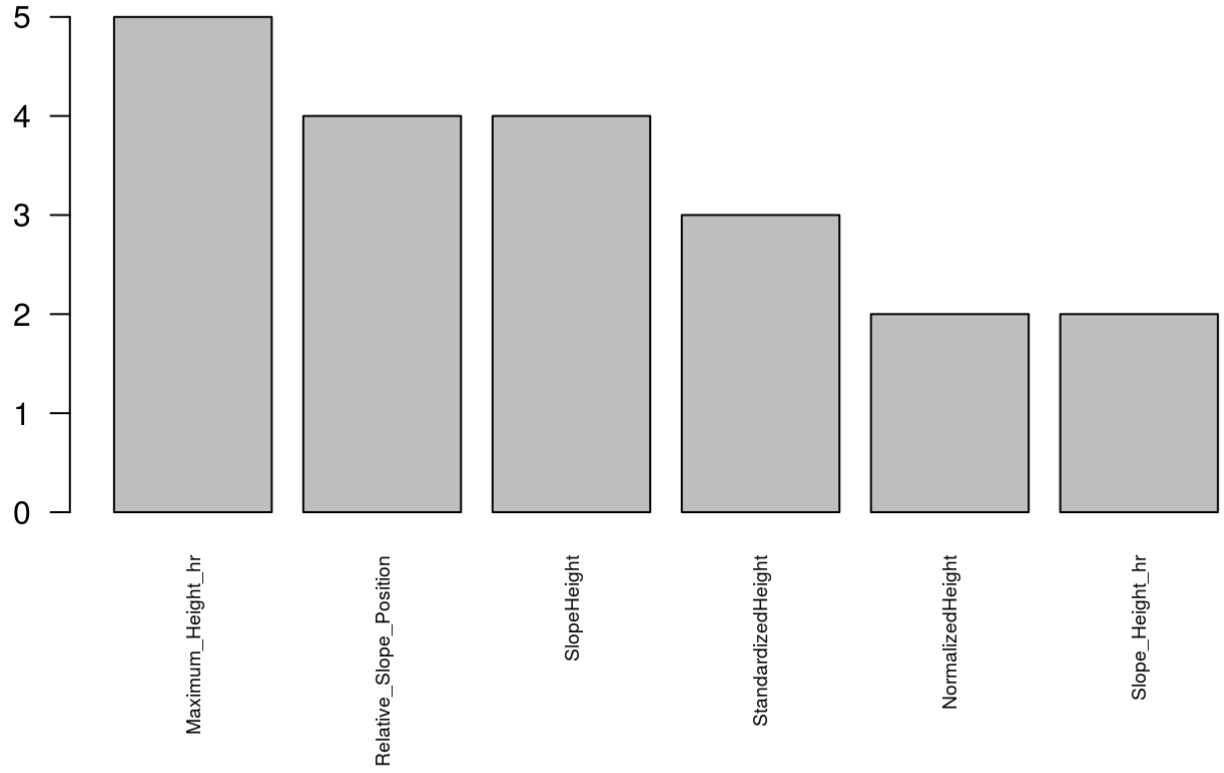


Heights

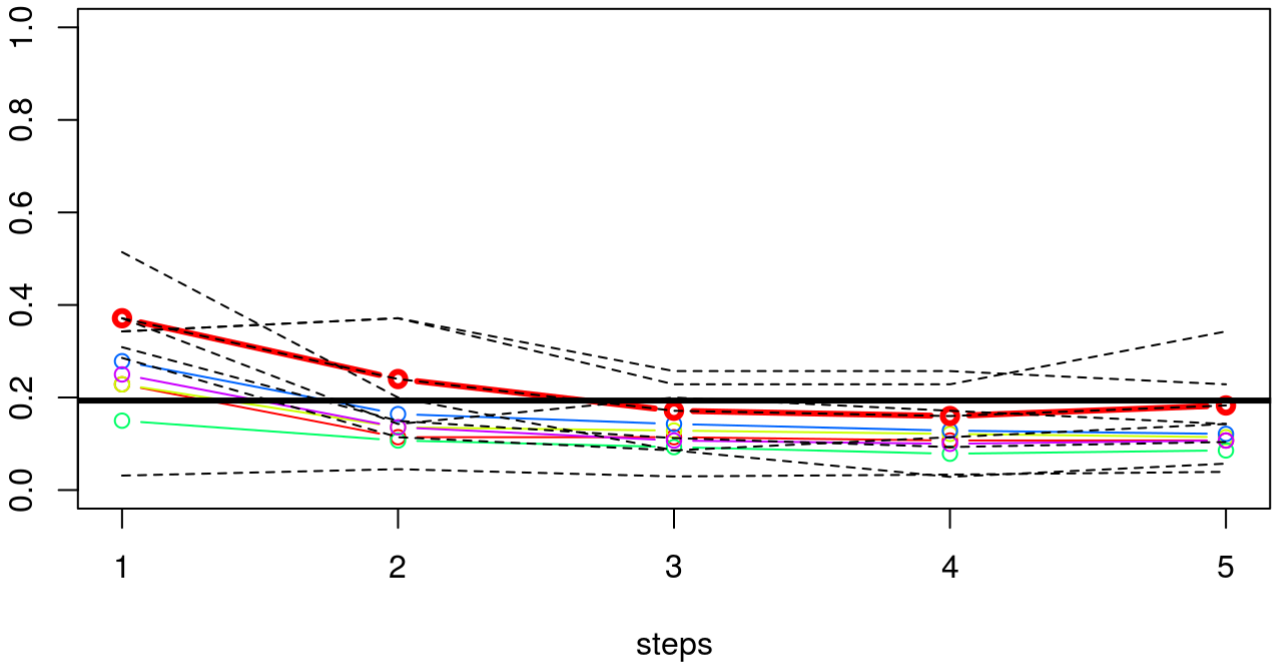
```
## [1] "Alluviale Ablagerung_vs_Kolluvium"
```



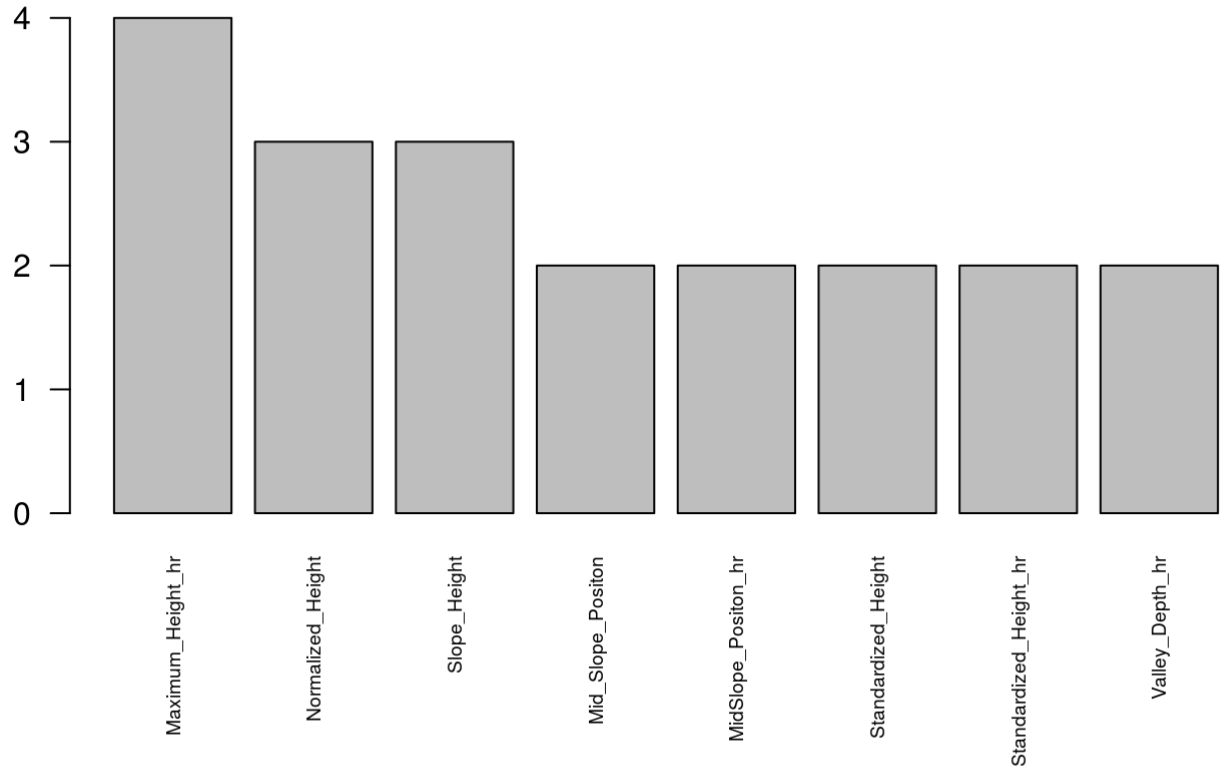

```
## [1] "Prediction error at end is:  0.28110661268556"
## [2] "Prediction error at end is:  0.171929824561404"
## [3] "Prediction error at end is:  0.208771929824561"
## [4] "Prediction error at end is:  0.198110661268556"
## [5] "Prediction error at end is:  0.197705802968961"
##                       k 1                     k 2                     k 3
## 1       Maximum_Height_hr       Maximum_Height_hr       Maximum_Height_hr
## 2 Relative_Slope_Position Relative_Slope_Position Relative_Slope_Position
## 3             SlopeHeight             SlopeHeight             SlopeHeight
## 4         Slope_Height_hr        NormalizedHeight         Slope_Height_hr
## 5      StandardizedHeight         Valley_Depth_hr     MidSlope_Positon_hr
##                       k 4                                 k 5
## 1 Relative_Slope_Position                   Maximum_Height_hr
## 2       Maximum_Height_hr                         SlopeHeight
## 3             ValleyDepth Vertical_Distance_to_Channel_Network
## 4      StandardizedHeight                  StandardizedHeight
## 5        NormalizedHeight                Standardized_Height
```



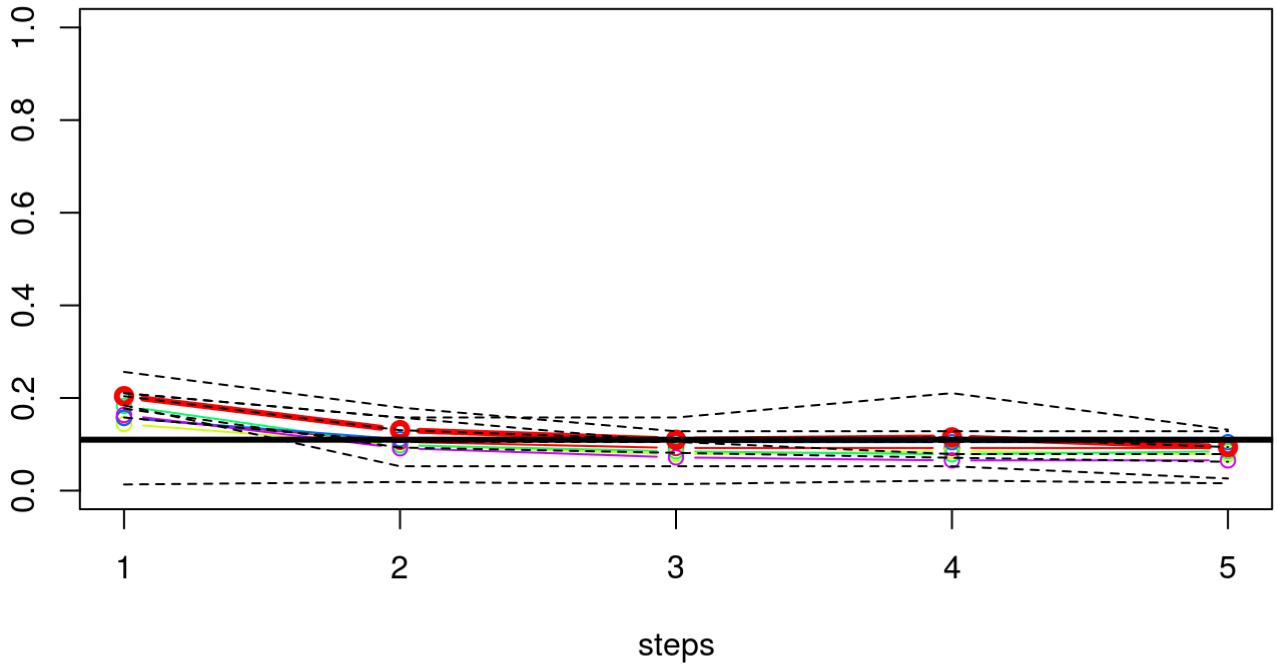

```
## [1] "Alluviale Ablagerung_vs_Moorablagerung"
```



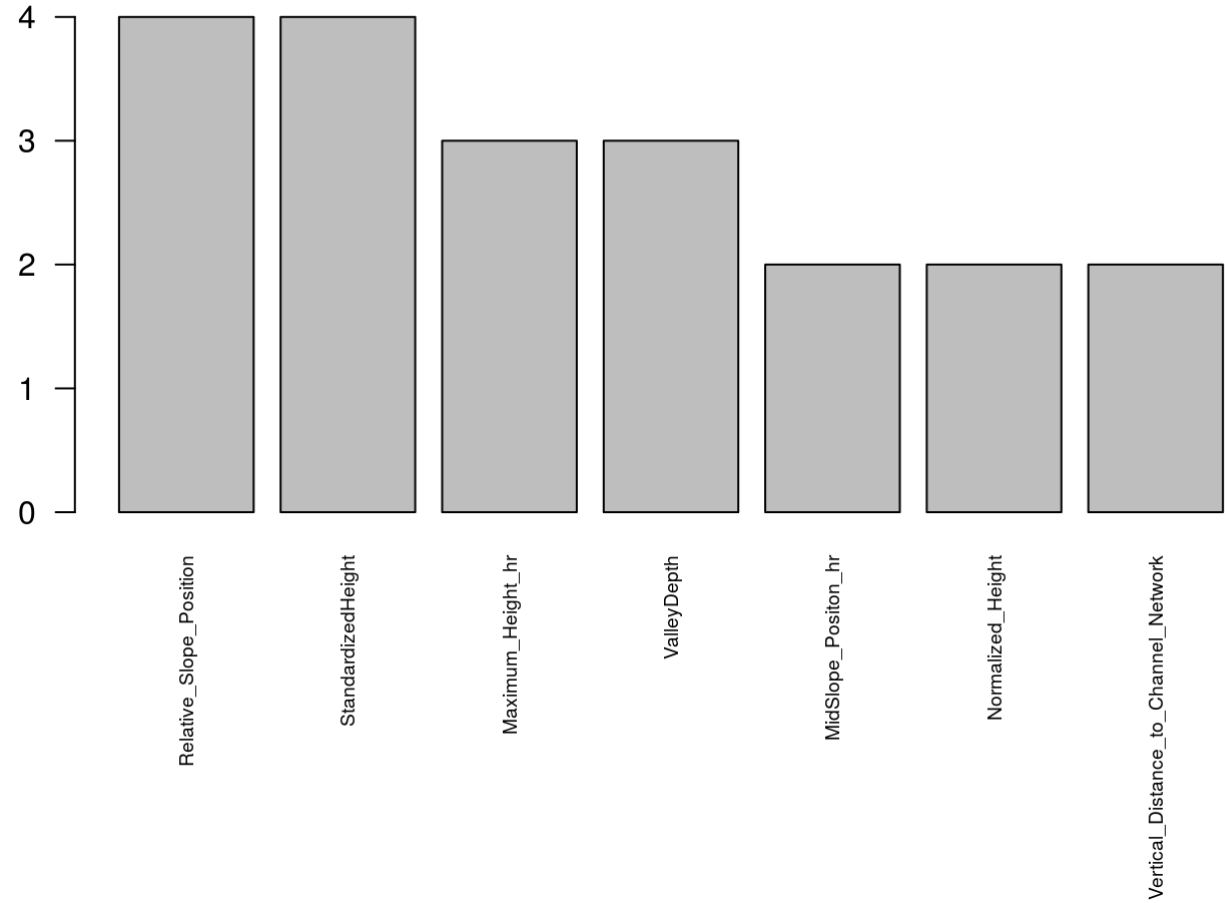
```
## [1] "Prediction error at end is:  0.371428571428571"
## [2] "Prediction error at end is:  0.24"
## [3] "Prediction error at end is:  0.171428571428571"
## [4] "Prediction error at end is:  0.16"
## [5] "Prediction error at end is:  0.182857142857143"
##                       k 1                                   k 2
## 1    Standardized_Height                    NormalizedHeight
## 2 Standardized_Height_hr                        Slope_Height
## 3      Normalized_Height                     Valley_Depth_hr
## 4     StandardizedHeight                   Maximum_Height_hr
## 5      Maximum_Height_hr Vertical_Distance_to_Channel_Network
##                     k 3                 k 4                      k 5
## 1    Maximum_Height_hr   Normalized_Height Relative_Slope_Position
## 2    Normalized_Height   Maximum_Height_hr  Standardized_Height_hr
## 3 Normalized_Height_hr        Slope_Height       Mid_Slope_Positon
## 4    Mid_Slope_Positon MidSlope_Positon_hr            Slope_Height
## 5  MidSlope_Positon_hr     Valley_Depth_hr     Standardized_Height
```



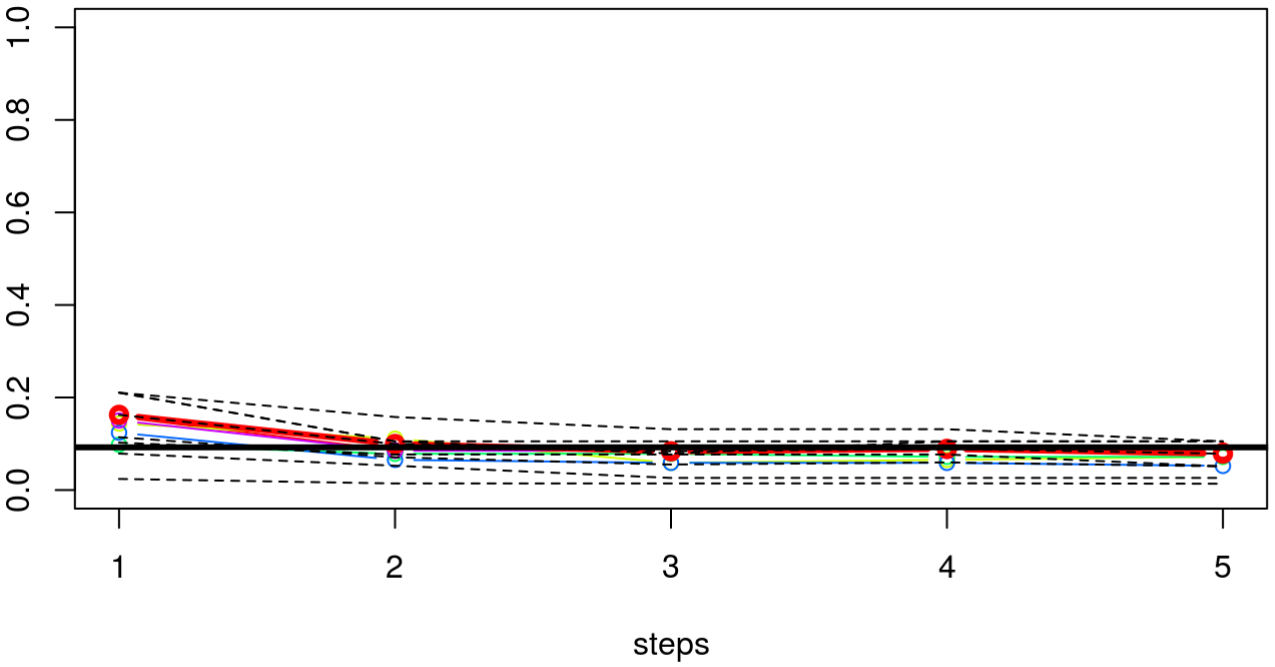

```
## [1] "Alluviale Ablagerung_vs_Glaziolakustrine Ablagerung"
```



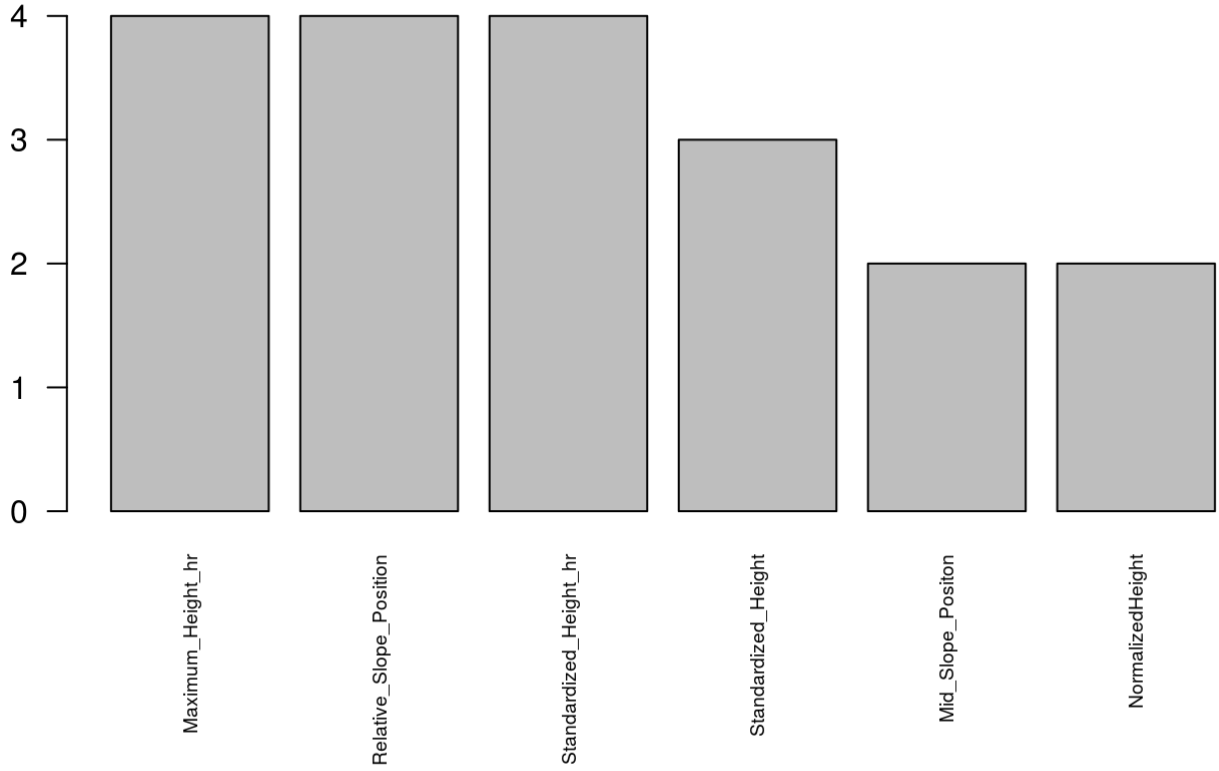

```
## [1] "Prediction error at end is:  0.20391363022942"
## [2] "Prediction error at end is:  0.130634278002699"
## [3] "Prediction error at end is:  0.109851551956815"
## [4] "Prediction error at end is:  0.115114709851552"
## [5] "Prediction error at end is:  0.0940620782726046"
##                       k 1                                 k 2
## 1 Relative_Slope_Position Vertical_Distance_to_Channel_Network
## 2       Normalized_Height                   Maximum_Height_hr
## 3      StandardizedHeight                  StandardizedHeight
## 4             ValleyDepth                         ValleyDepth
## 5  Standardized_Height_hr                        Slope_Height
##                       k 3                                 k 4
## 1 Relative_Slope_Position Vertical_Distance_to_Channel_Network
## 2       Normalized_Height             Relative_Slope_Position
## 3       Maximum_Height_hr                 MidSlope_Positon_hr
## 4      StandardizedHeight                 Standardized_Height
## 5       Mid_Slope_Positon                         ValleyDepth
##                       k 5
## 1       Maximum_Height_hr
## 2 Relative_Slope_Position
## 3      StandardizedHeight
## 4     MidSlope_Positon_hr
## 5         Slope_Height_hr
```



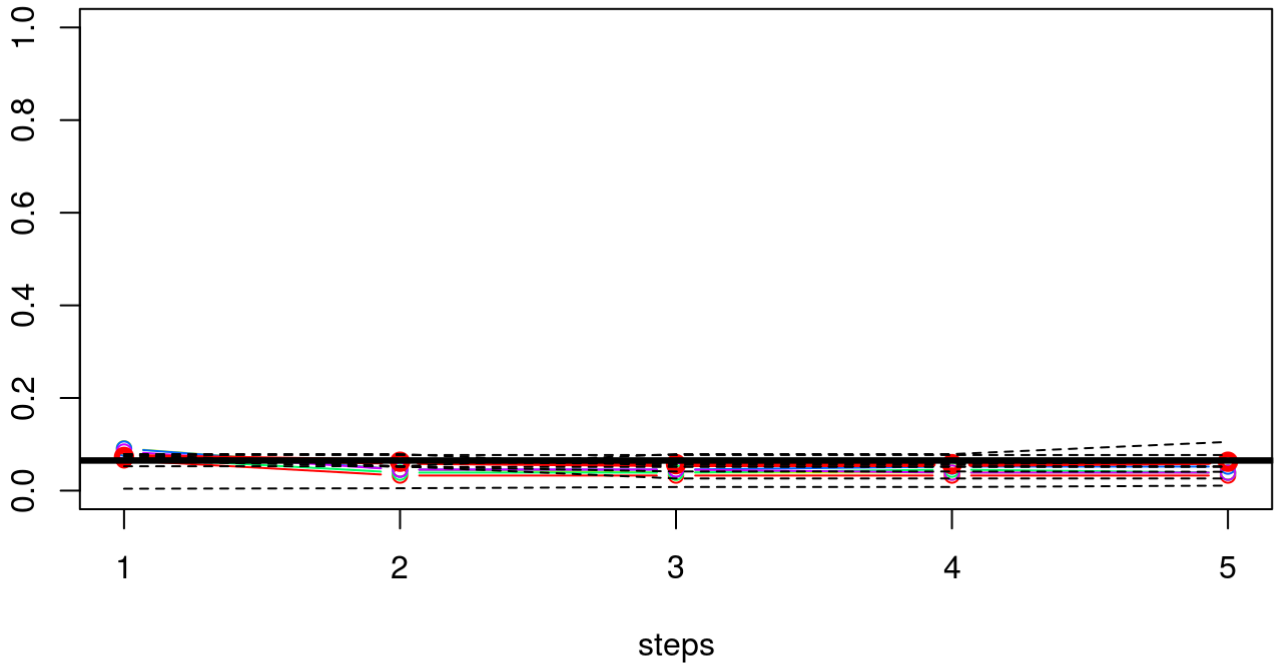

```
## [1] "Alluviale Ablagerung_vs_Grundmoraene"
```



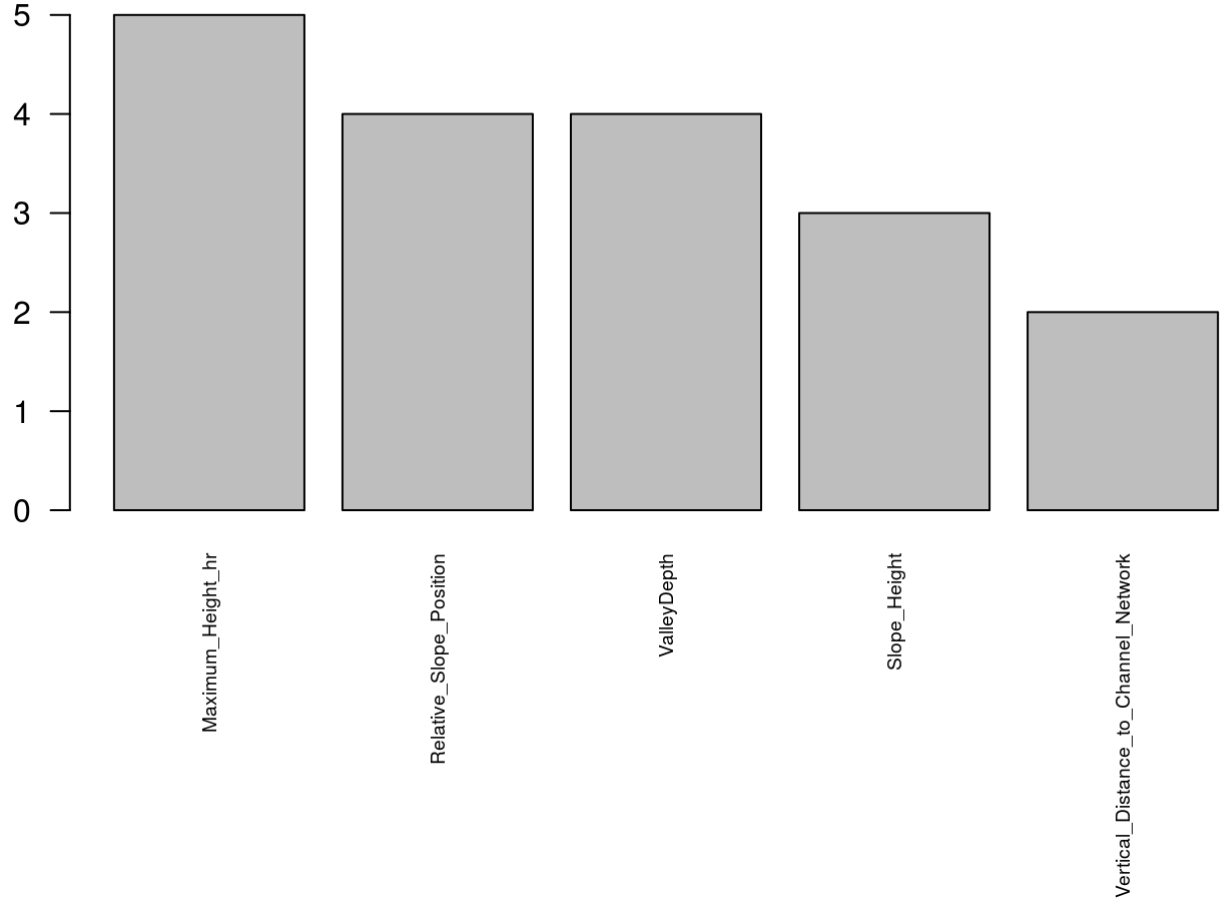
```
## [1] "Prediction error at end is:  0.162618083670715"
## [2] "Prediction error at end is:  0.0995951417004049"
## [3] "Prediction error at end is:  0.0838056680161943"
## [4] "Prediction error at end is:  0.0890688259109312"
## [5] "Prediction error at end is:  0.0786774628879892"
##                                   k 1                    k 2
## 1                   Maximum_Height_hr     Standardized_Height
## 2               Standardized_Height_hr Relative_Slope_Position
## 3                     Valley_Depth_hr  Standardized_Height_hr
## 4                        Slope_Height    Normalized_Height_hr
## 5 Vertical_Distance_to_Channel_Network        NormalizedHeight
##                       k 3                    k 4                    k 5
## 1       Maximum_Height_hr Relative_Slope_Position       Maximum_Height_hr
## 2 Relative_Slope_Position       Maximum_Height_hr Relative_Slope_Position
## 3  Standardized_Height_hr        NormalizedHeight     Standardized_Height
## 4       Mid_Slope_Positon       Mid_Slope_Positon  Standardized_Height_hr
## 5       Normalized_Height     Standardized_Height         Slope_Height_hr
```



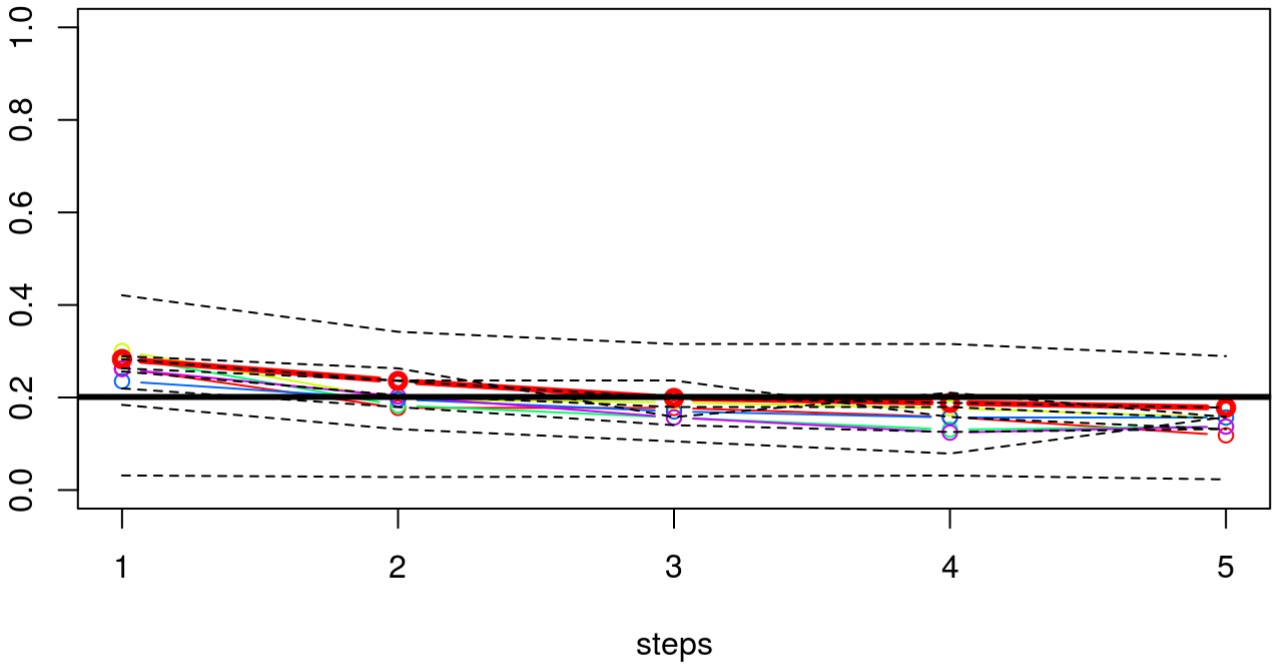

```
## [1] "Alluviale Ablagerung_vs_Moraene undifferenziert"
```




```
## [1] "Prediction error at end is:  0.0728744939271255"
## [2] "Prediction error at end is:  0.0624831309041835"
## [3] "Prediction error at end is:  0.0572199730094467"
## [4] "Prediction error at end is:  0.0572199730094467"
## [5] "Prediction error at end is:  0.0624831309041835"
##                       k 1                      k 2                    k 3
## 1       Maximum_Height_hr       Maximum_Height_hr      Maximum_Height_hr
## 2             SlopeHeight            Slope_Height           Slope_Height
## 3 Relative_Slope_Position             ValleyDepth        Slope_Height_hr
## 4             ValleyDepth Relative_Slope_Position Standardized_Height_hr
## 5         Valley_Depth_hr        NormalizedHeight      Normalized_Height
##                                   k 4
## 1                   Maximum_Height_hr
## 2                  Standardized_Height
## 3                           ValleyDepth
## 4 Vertical_Distance_to_Channel_Network
## 5              Relative_Slope_Position
##                                   k 5
## 1                   Maximum_Height_hr
## 2              Relative_Slope_Position
## 3                          Slope_Height
## 4                           ValleyDepth
## 5 Vertical_Distance_to_Channel_Network
```




```
## [1] "Alluviale Ablagerung_vs_gemischte Kegel"
```



```
## [1] "Prediction error at end is:  0.282860998650472"
## [2] "Prediction error at end is:  0.235762483130904"
## [3] "Prediction error at end is:  0.199055330634278"
## [4] "Prediction error at end is:  0.188529014844804"
## [5] "Prediction error at end is:  0.178137651821862"
##                                   k 1                     k 2
## 1                   Maximum_Height_hr       Maximum_Height_hr
## 2             Relative_Slope_Position Relative_Slope_Position
## 3                     Valley_Depth_hr      StandardizedHeight
## 4                         ValleyDepth         Slope_Height_hr
## 5 Vertical_Distance_to_Channel_Network             ValleyDepth
##                                   k 3
## 1                   Maximum_Height_hr
## 2                   Mid_Slope_Positon
## 3                         ValleyDepth
## 4 Vertical_Distance_to_Channel_Network
## 5                     Slope_Height_hr
##                                   k 4                     k 5
## 1                   Maximum_Height_hr       Maximum_Height_hr
## 2                     Valley_Depth_hr Relative_Slope_Position
## 3             Relative_Slope_Position         Valley_Depth_hr
## 4                        Slope_Height             ValleyDepth
## 5 Vertical_Distance_to_Channel_Network     Standardized_Height
```