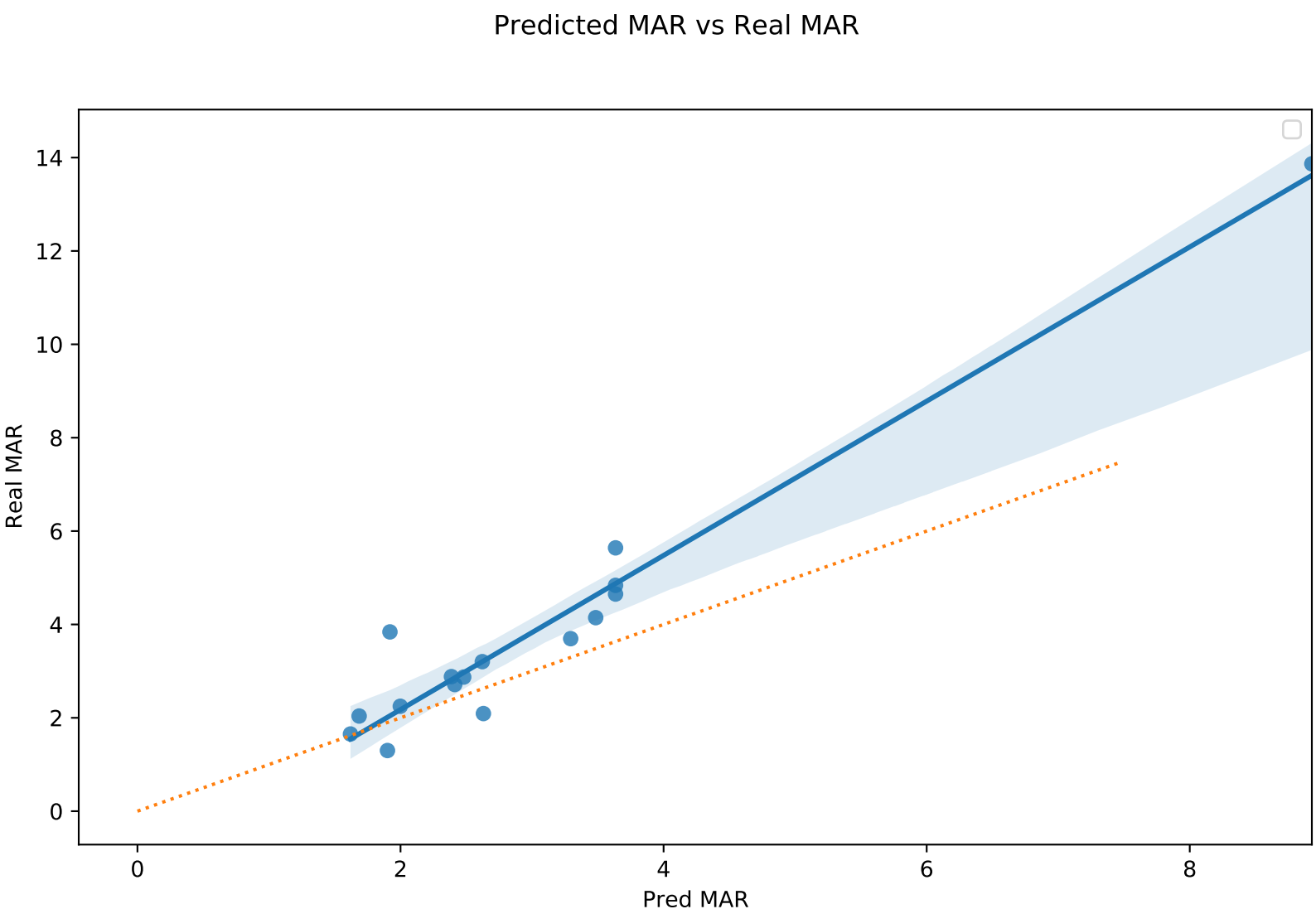
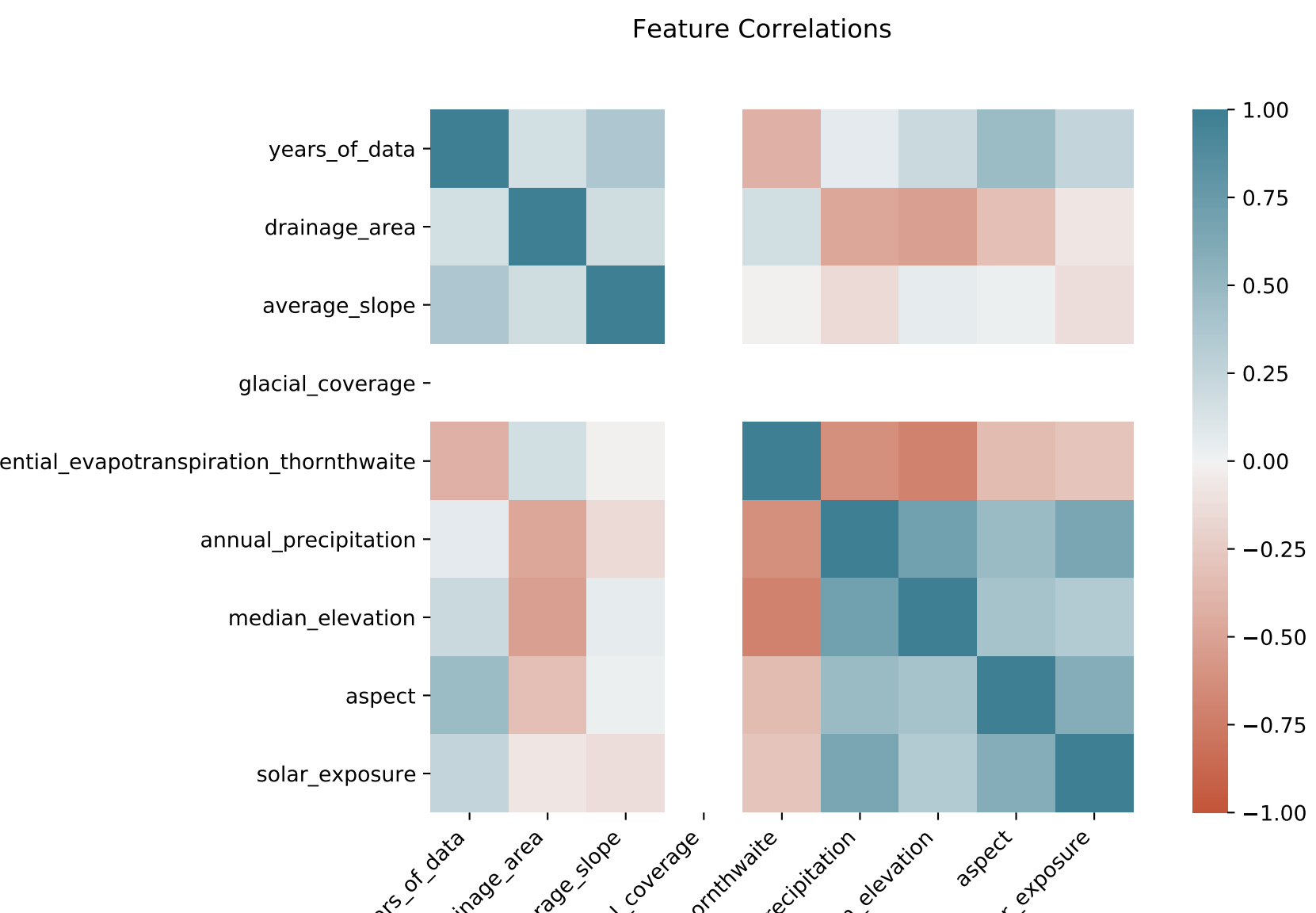
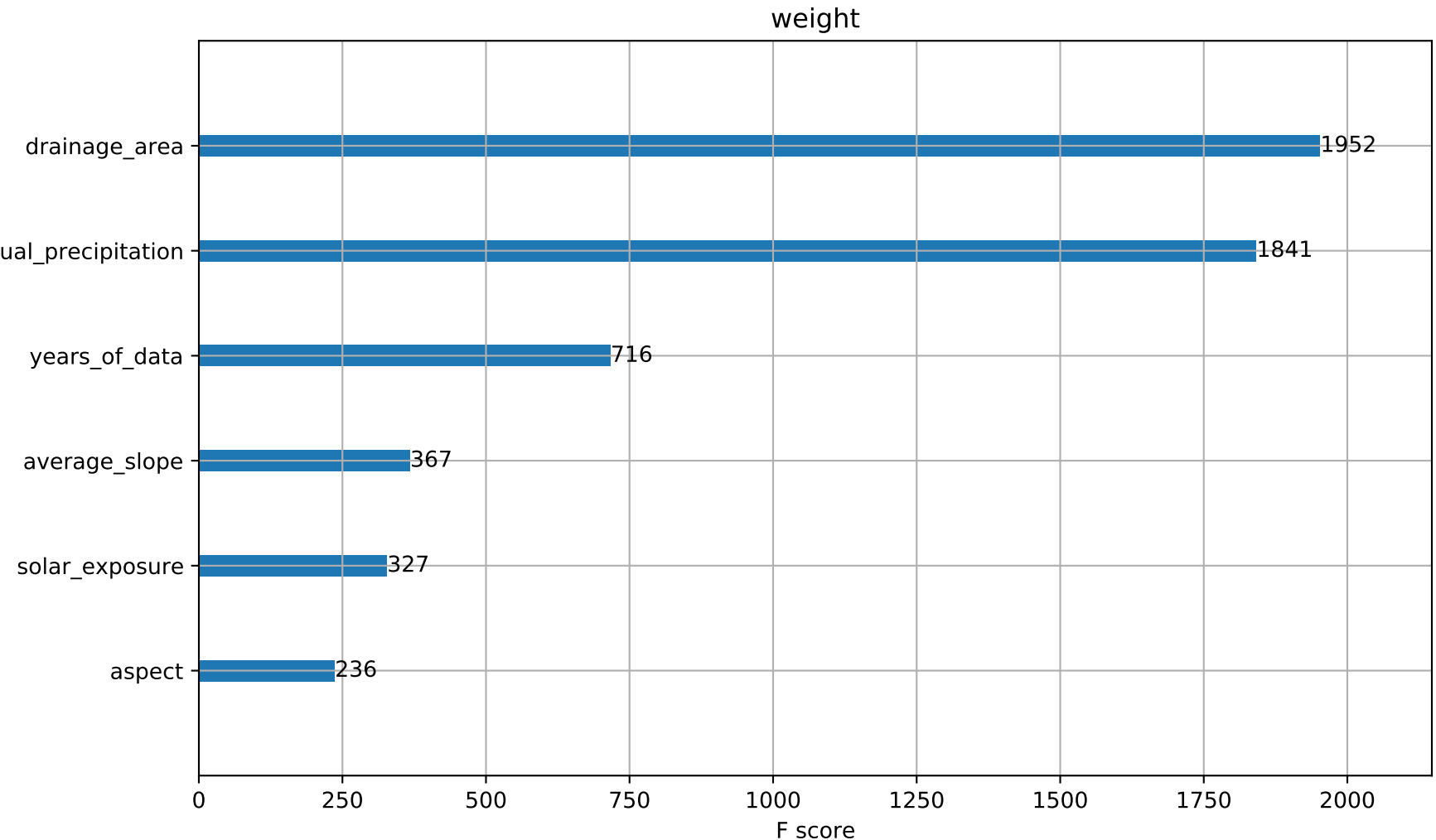
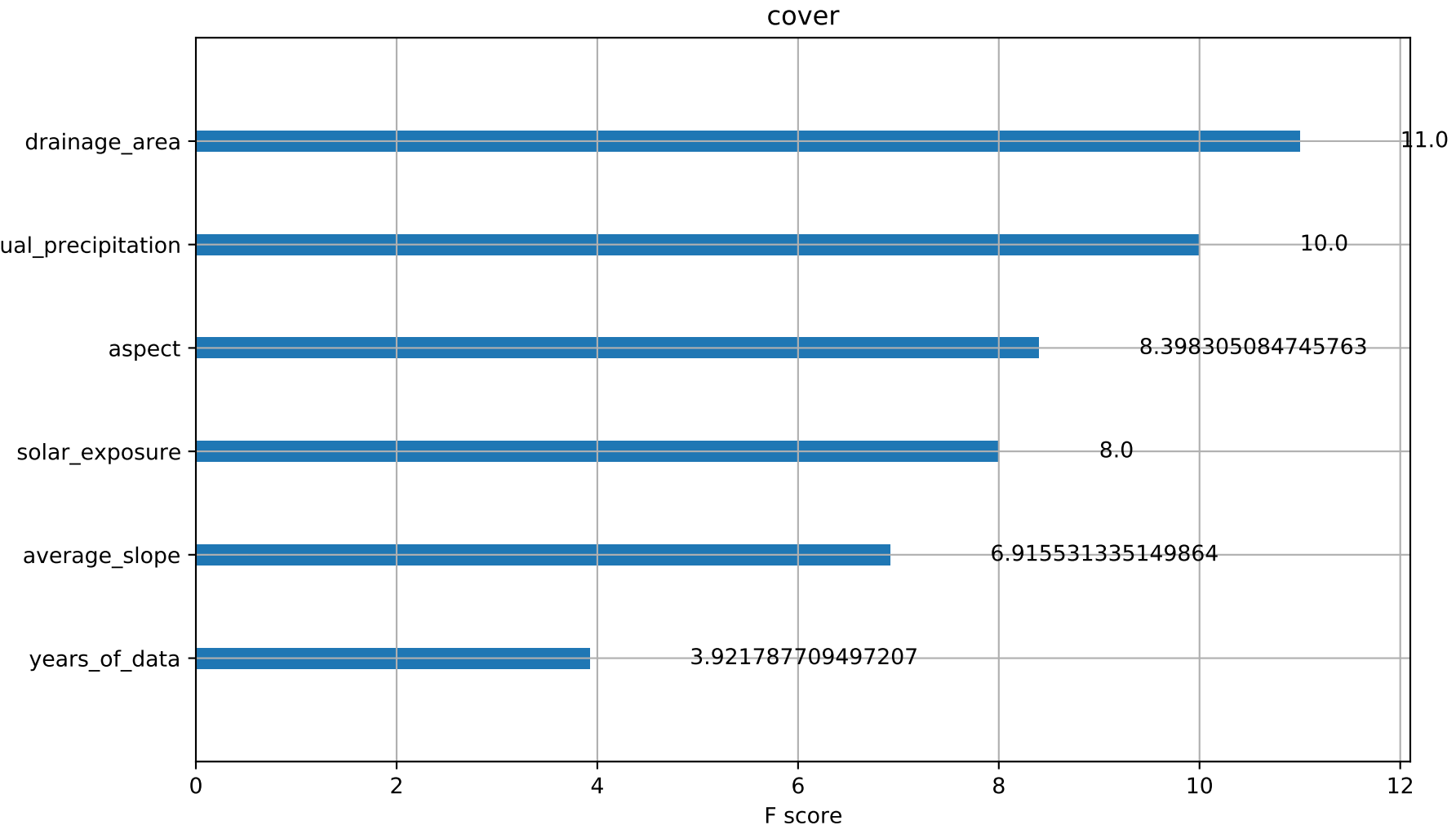
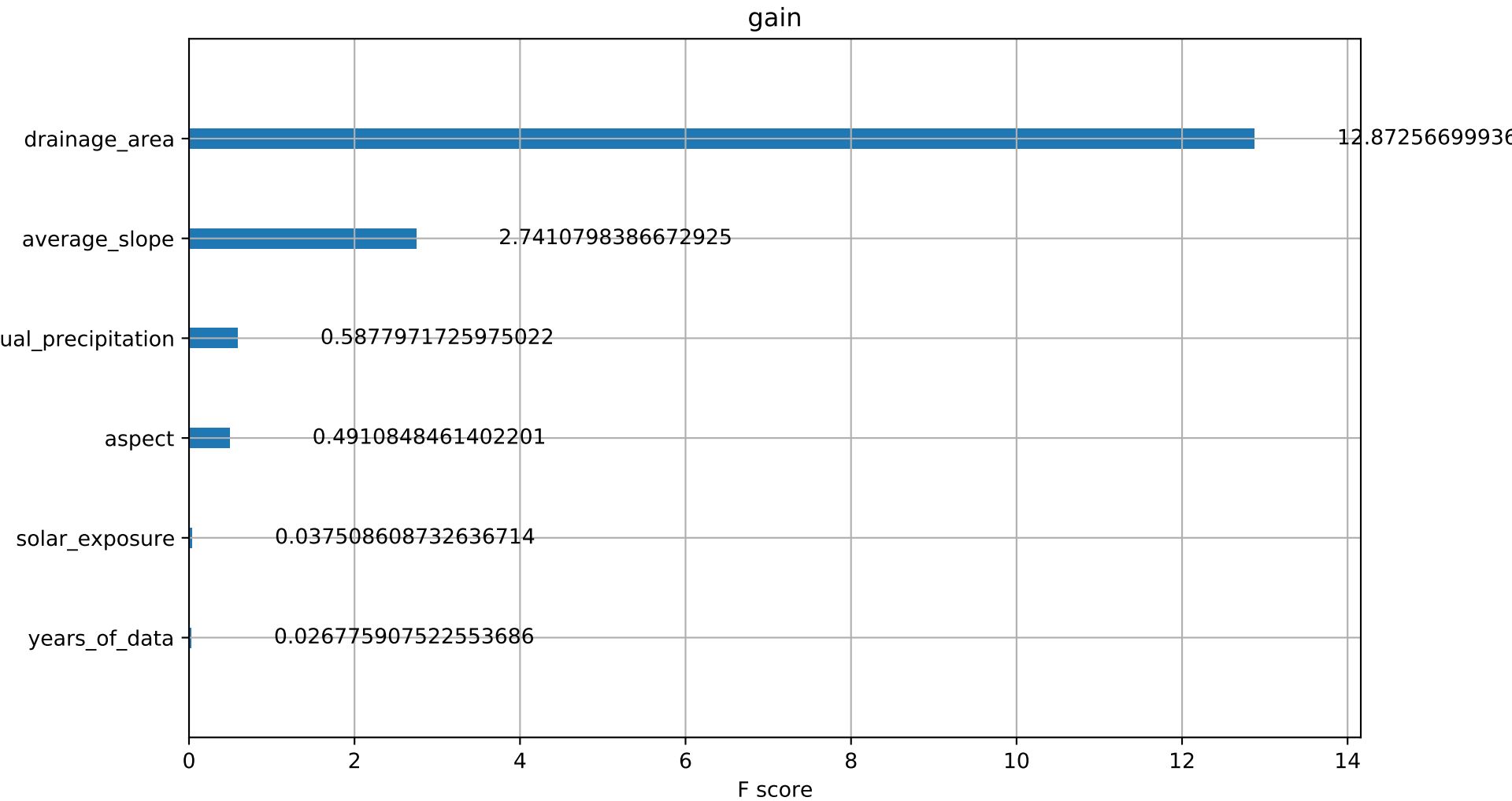
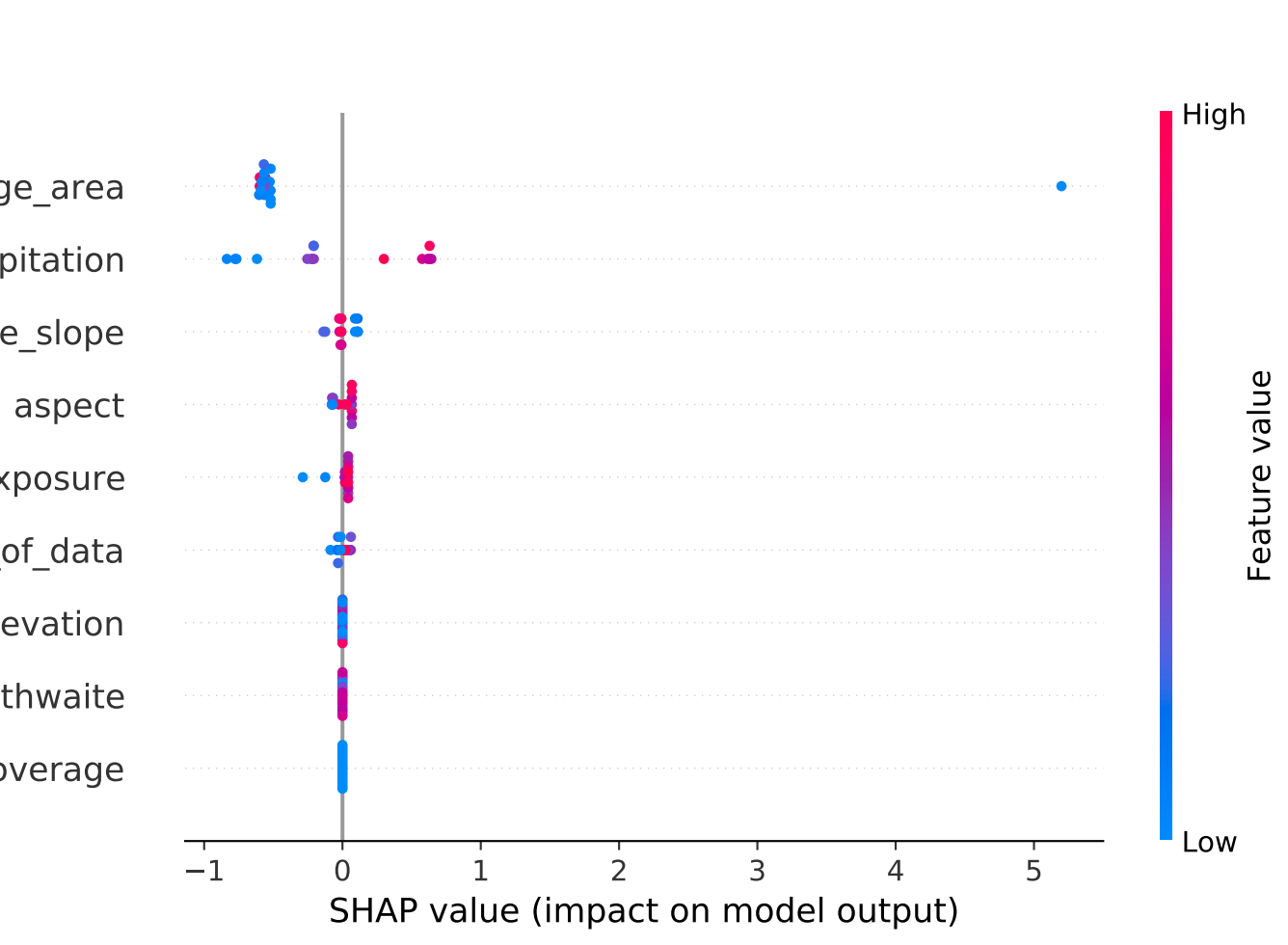

Predicted MAR vs Real MAR
Real MAR
Pred MAR
0
2
4
6
8
10
12
14


Feature Correlations
years_of_data
drainage_area
average_slope
glacial_coverage
ential_evapotranspiration_thornthwaite
annual_precipitation
median_elevation
aspect
solar_exposure
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00

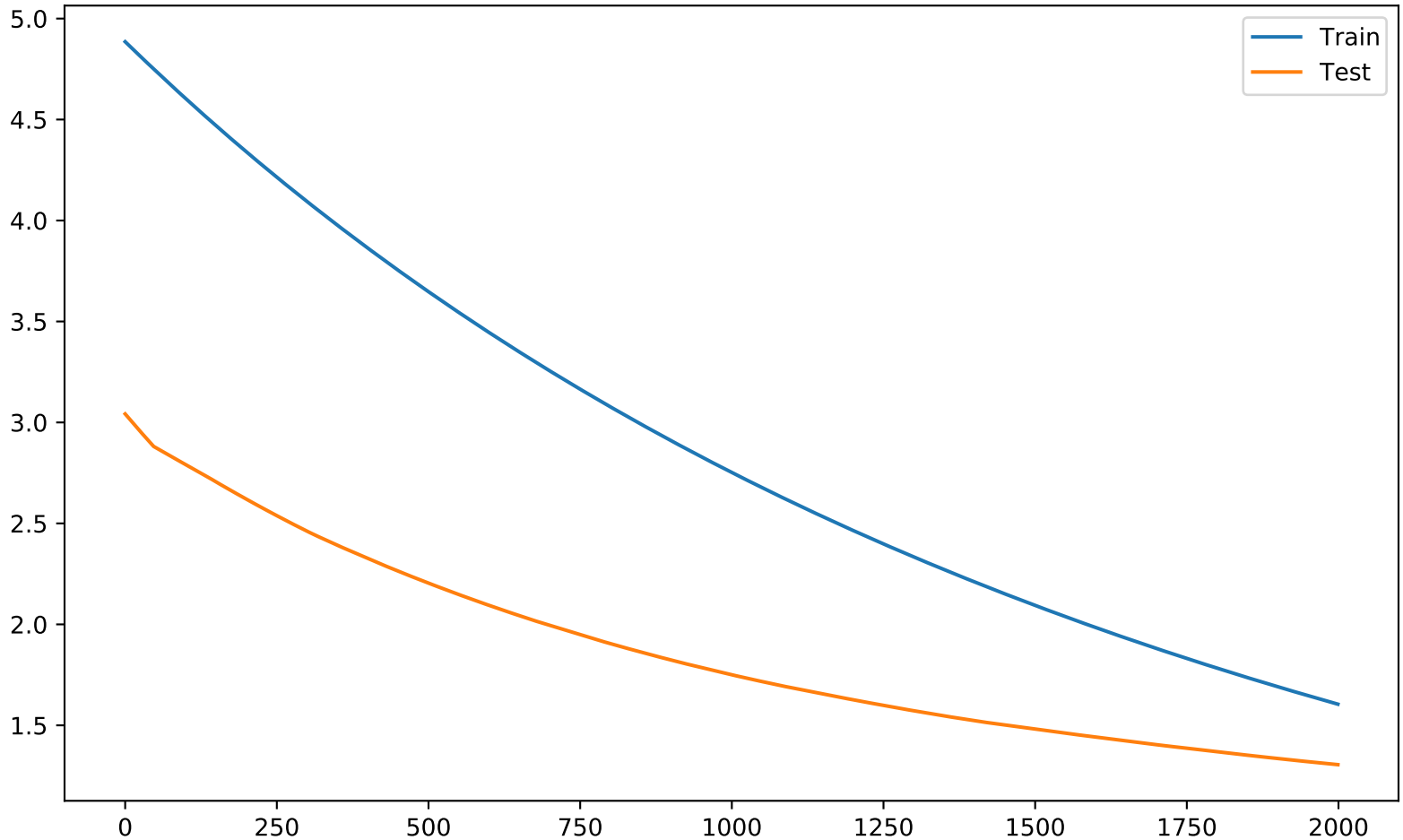

weight
drainage_area
ual_precipitation
years_of_data
average_slope
solar_exposure
aspect
1952
1841
716
367
327
236
0
250
500
750
1000
1250
1500
1750
2000
F score

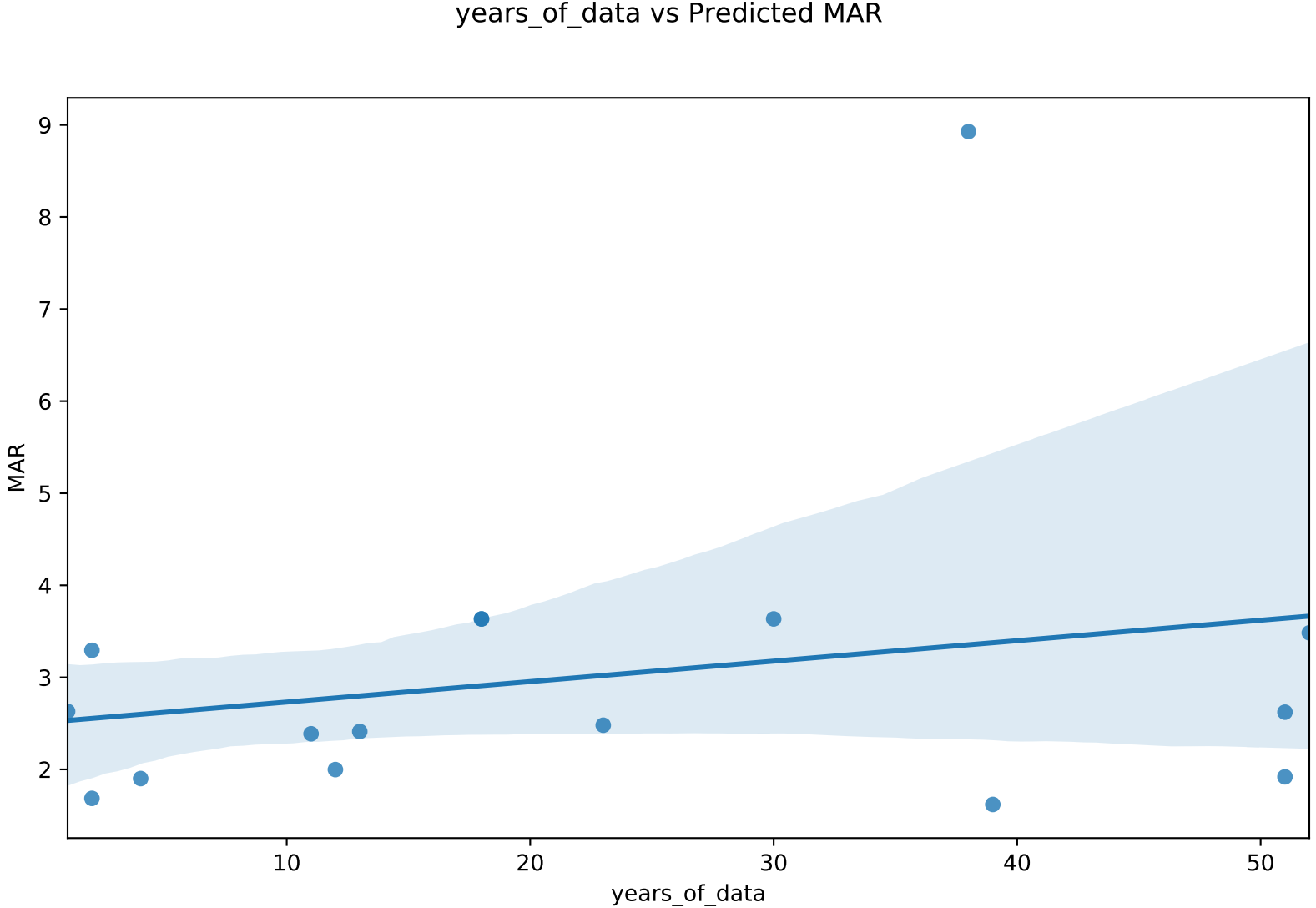

cover
drainage_area
ual_precipitation
aspect
solar_exposure
average_slope
years_of_data
11.0
10.0
8.398305084745763
8.0
6.915531335149864
3.921787709497207
0
2
4
6
8
10
12
F score

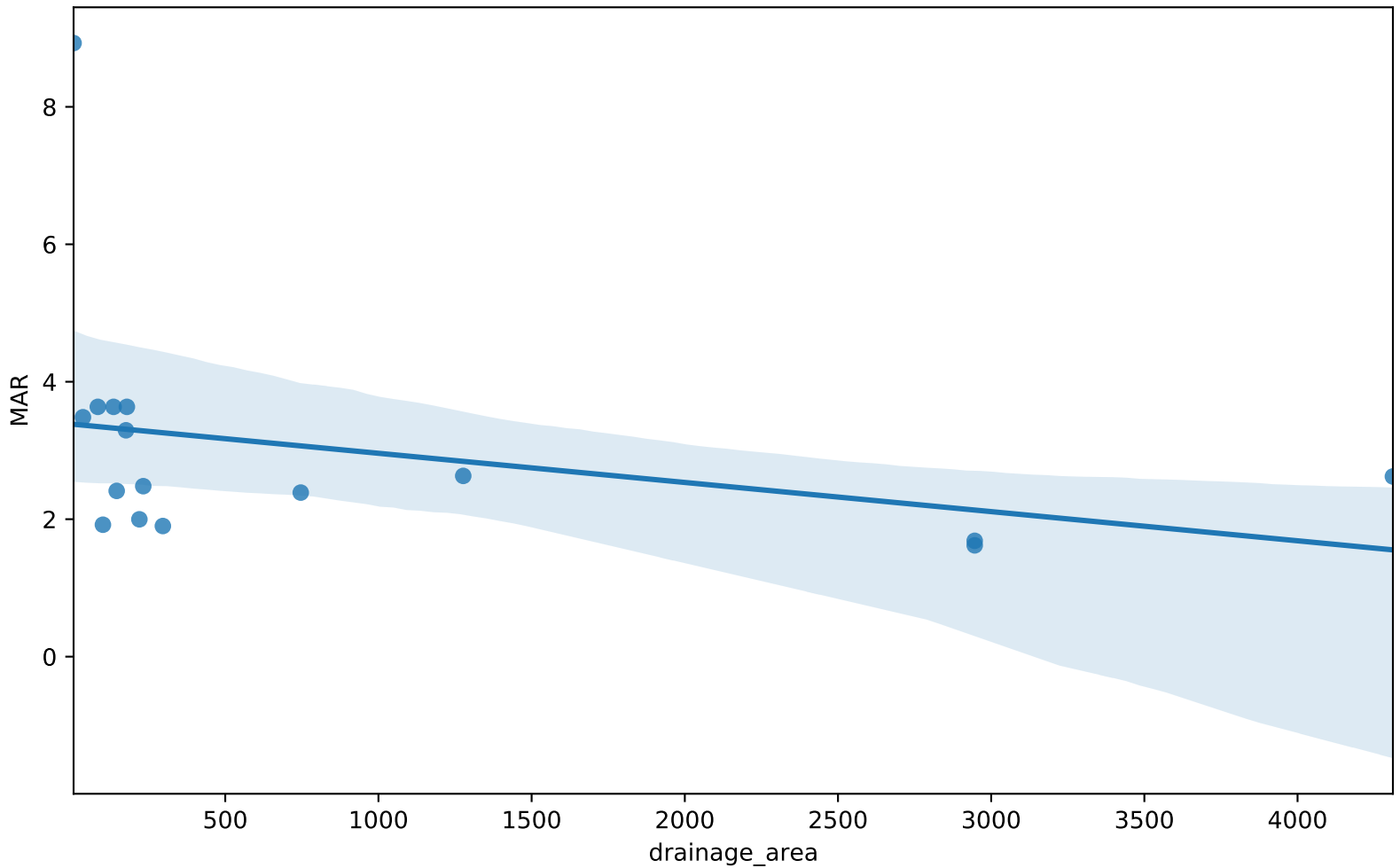

gain
drainage_area
12.8725669993
average_slope
2.7410798386672925
ual_precipitation
0.5877971725975022
aspect
0.4910848461402201
solar_exposure
0.037508608732636714
years_of_data
0.026775907522553686
0
2
4
6
8
10
12
14
F score

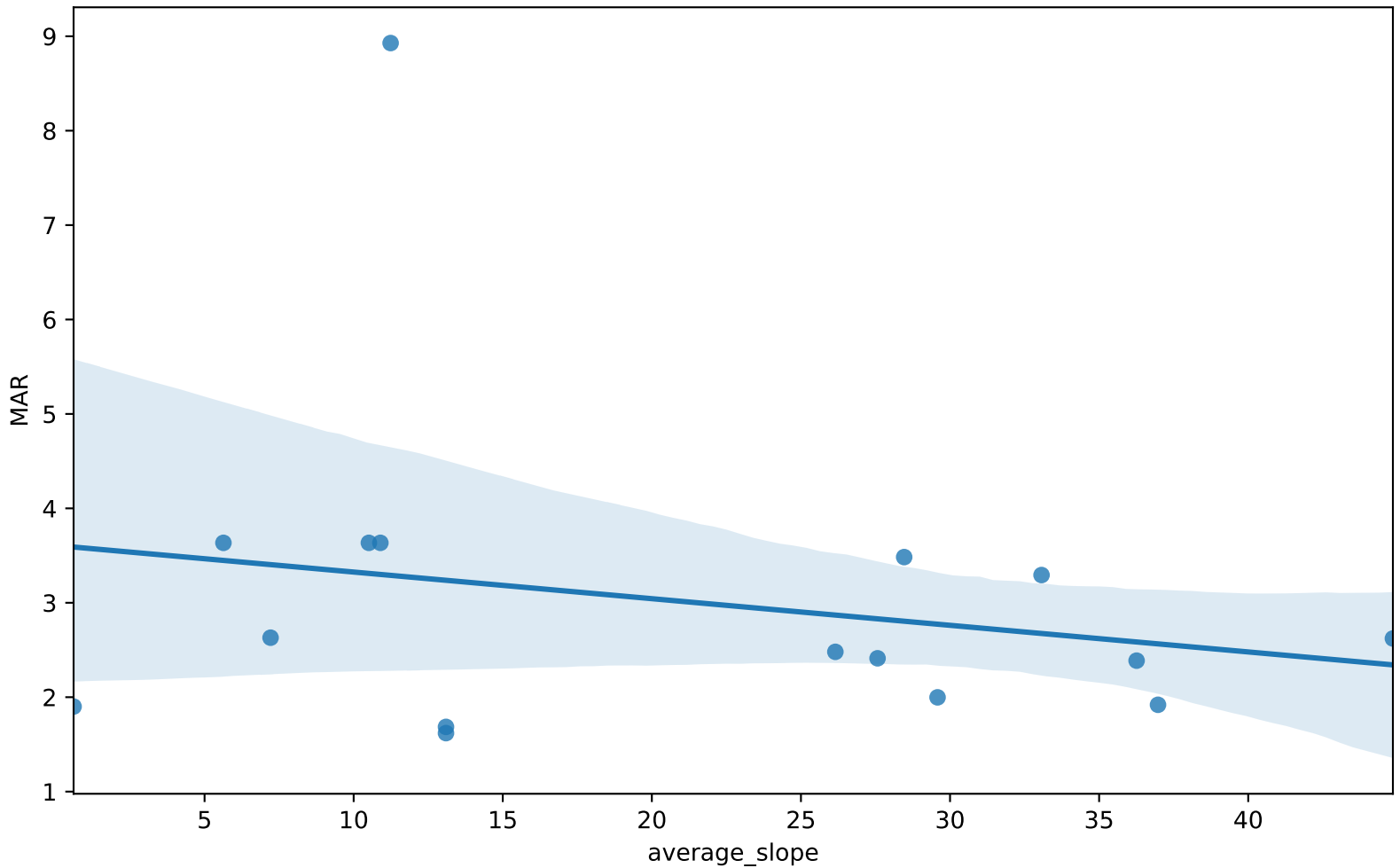

ge_area
pitation
e_slope
aspect
xposure
of_data
evation
thwaite
overage
−1
0
1
2
3
4
5
SHAP value (impact on model output)
High
Feature value
Low

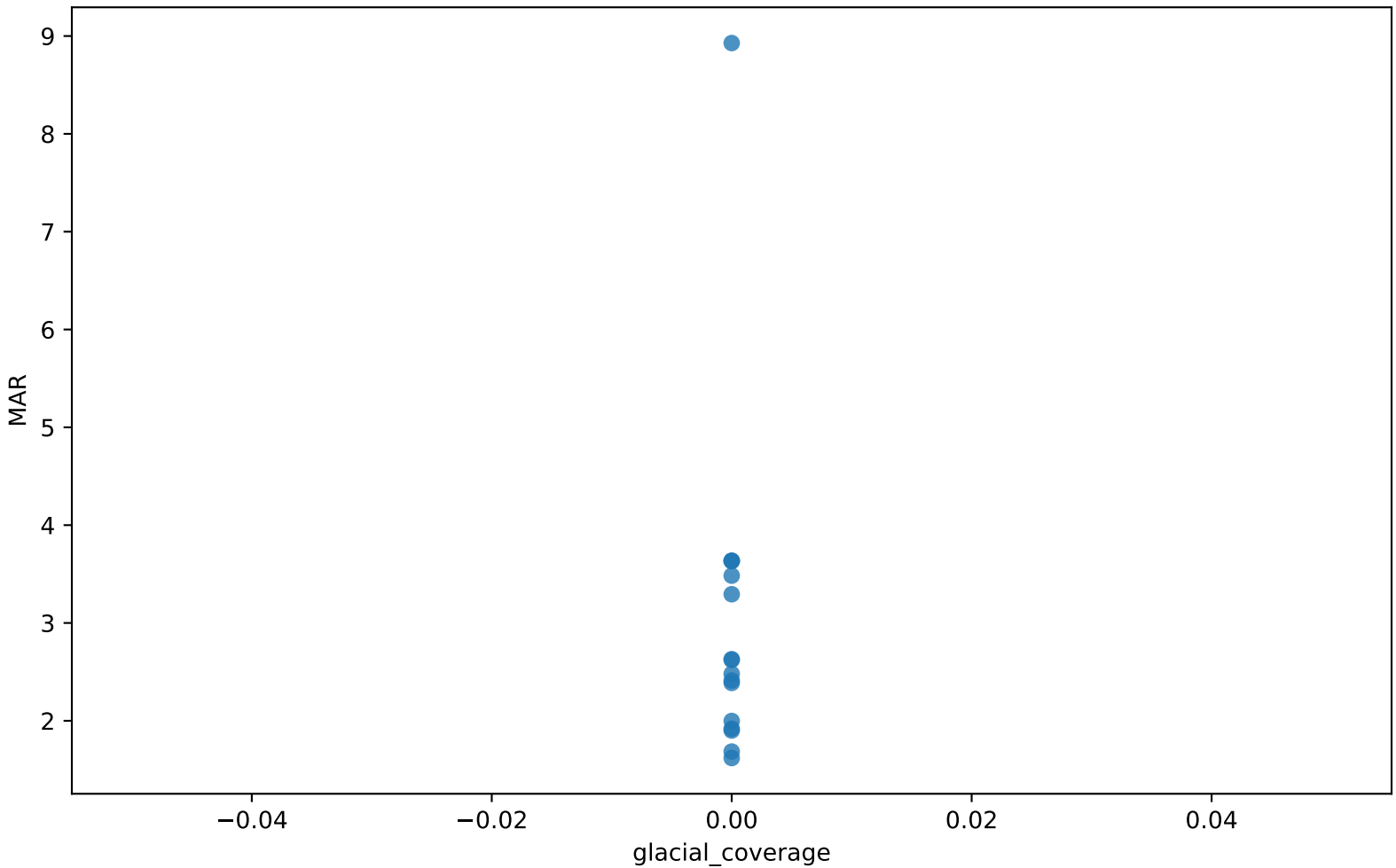
RMSE: 1.517539681425793 R2: 0.7146864947512843

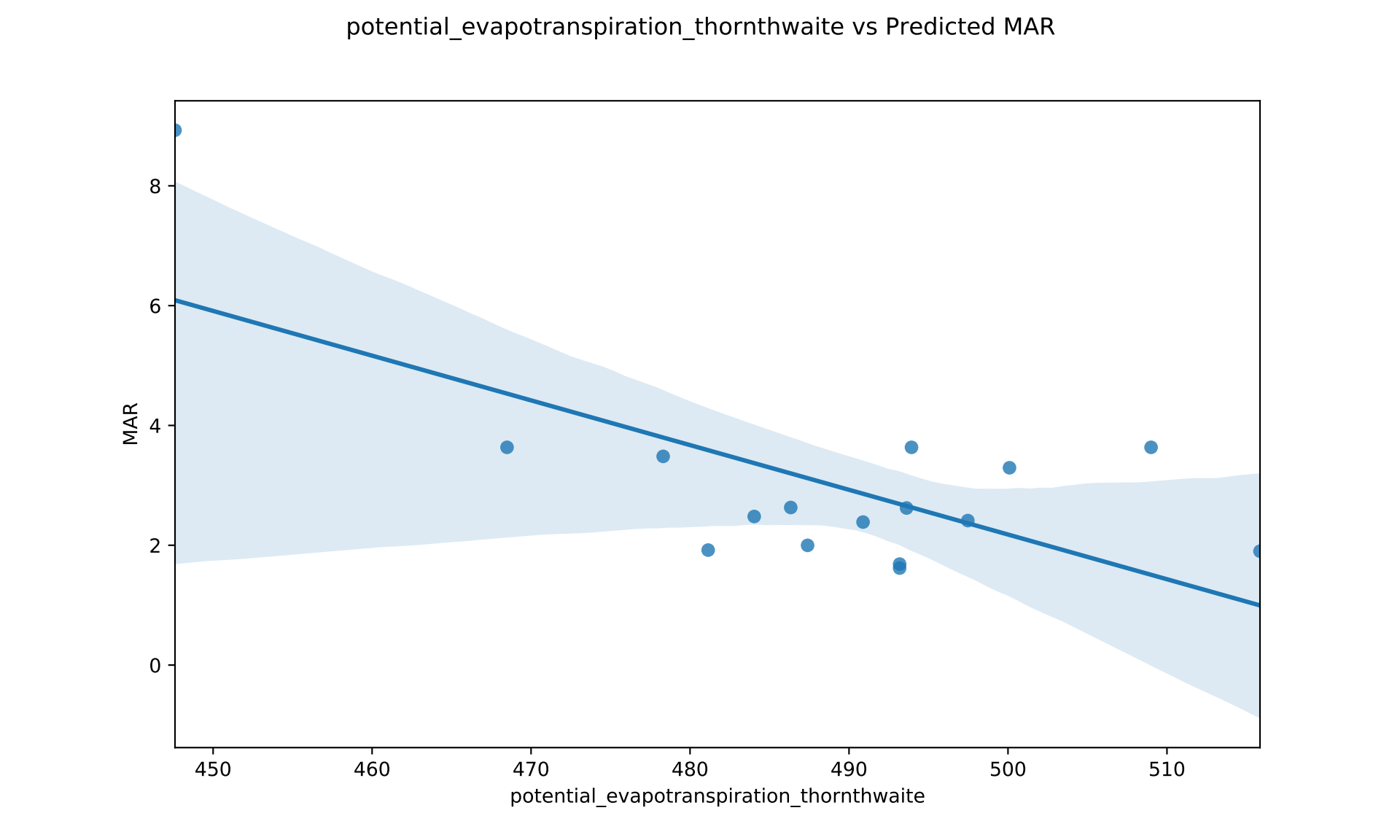


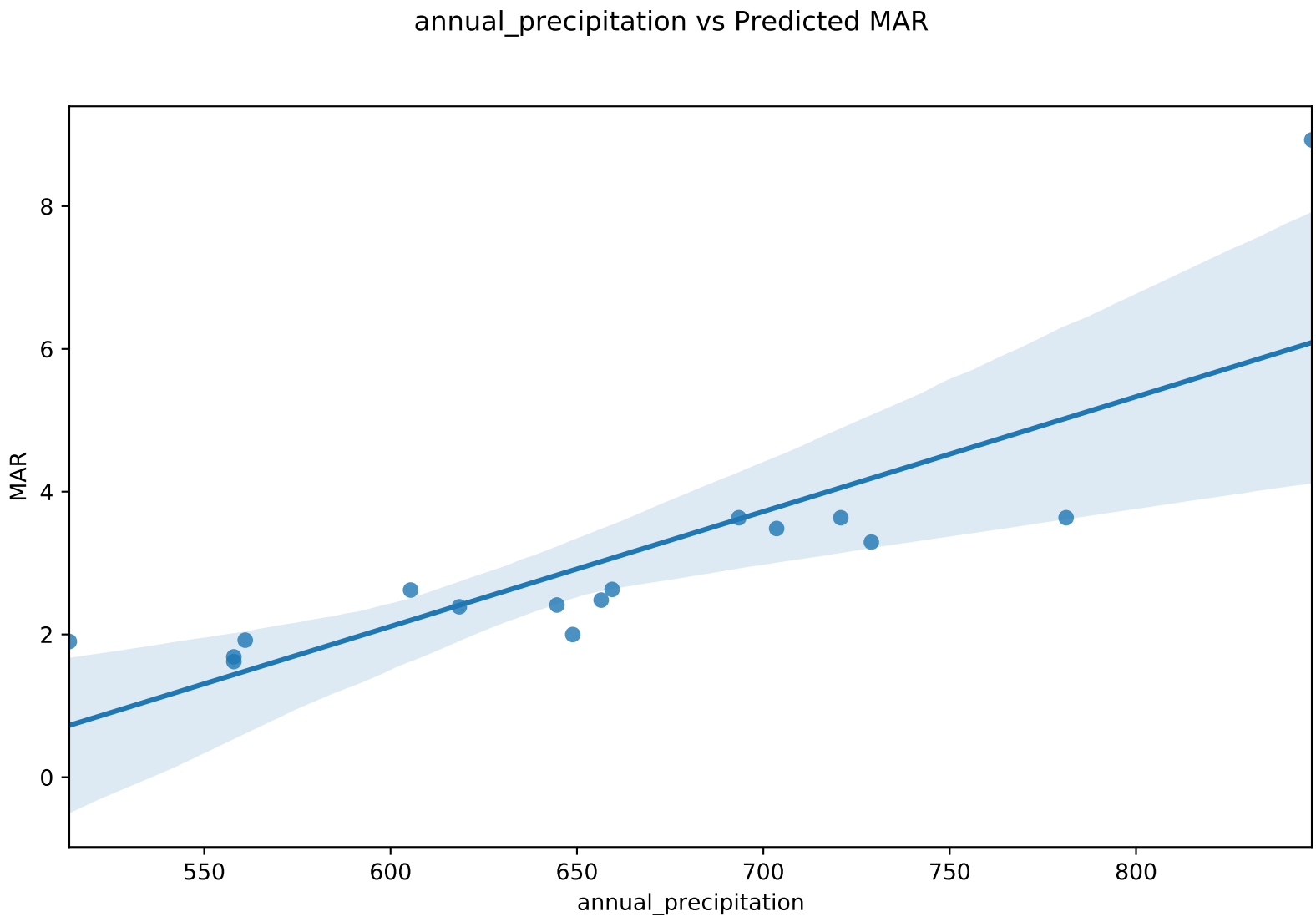

years_of_data vs Predicted MAR
MAR
years_of_data
9
8
7
6
5
4
3
2
10
20
30
40
50

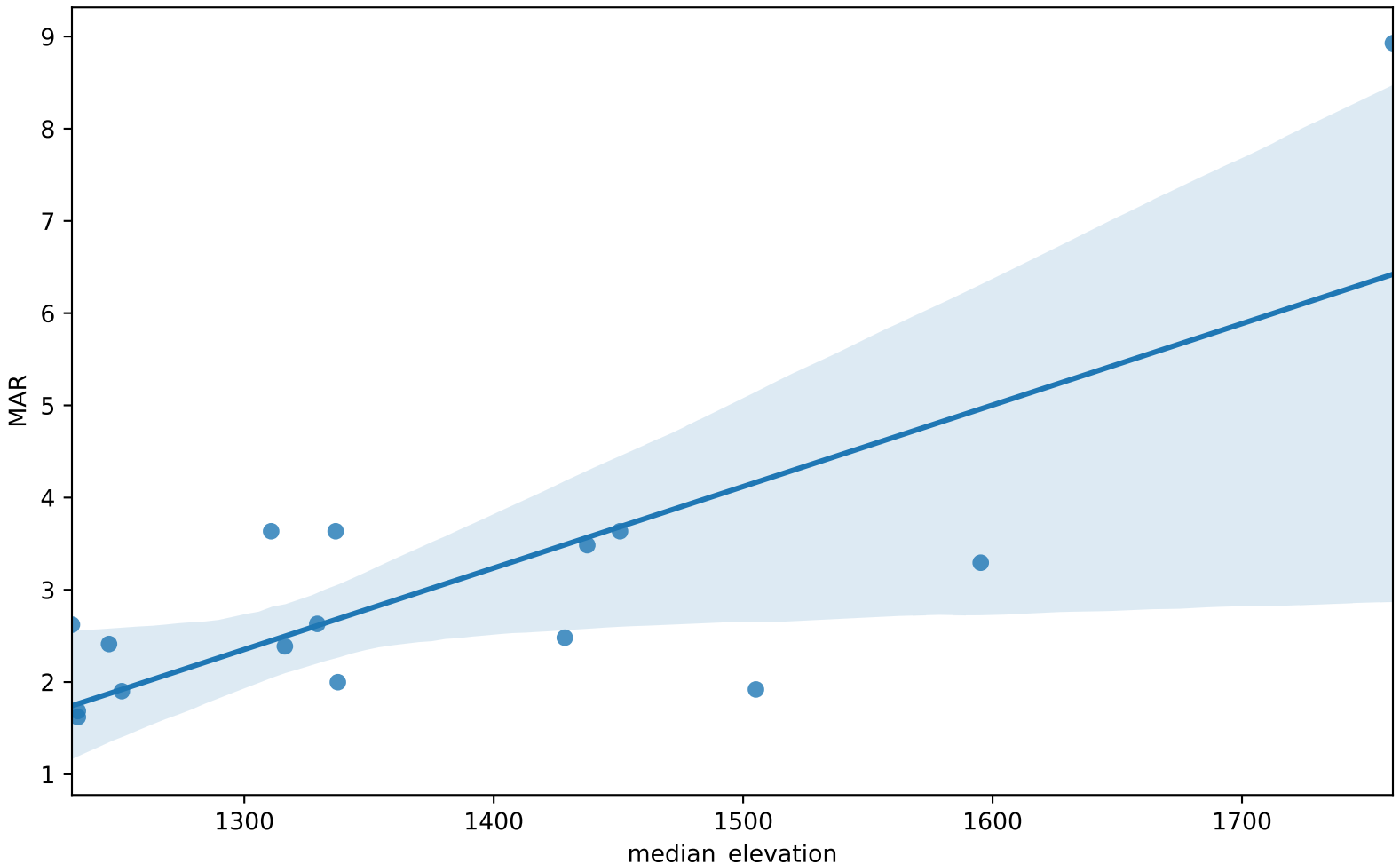

drainage_area vs Predicted MAR
MAR
drainage_area
0
2
4
6
8
500
1000
1500
2000
2500
3000
3500
4000

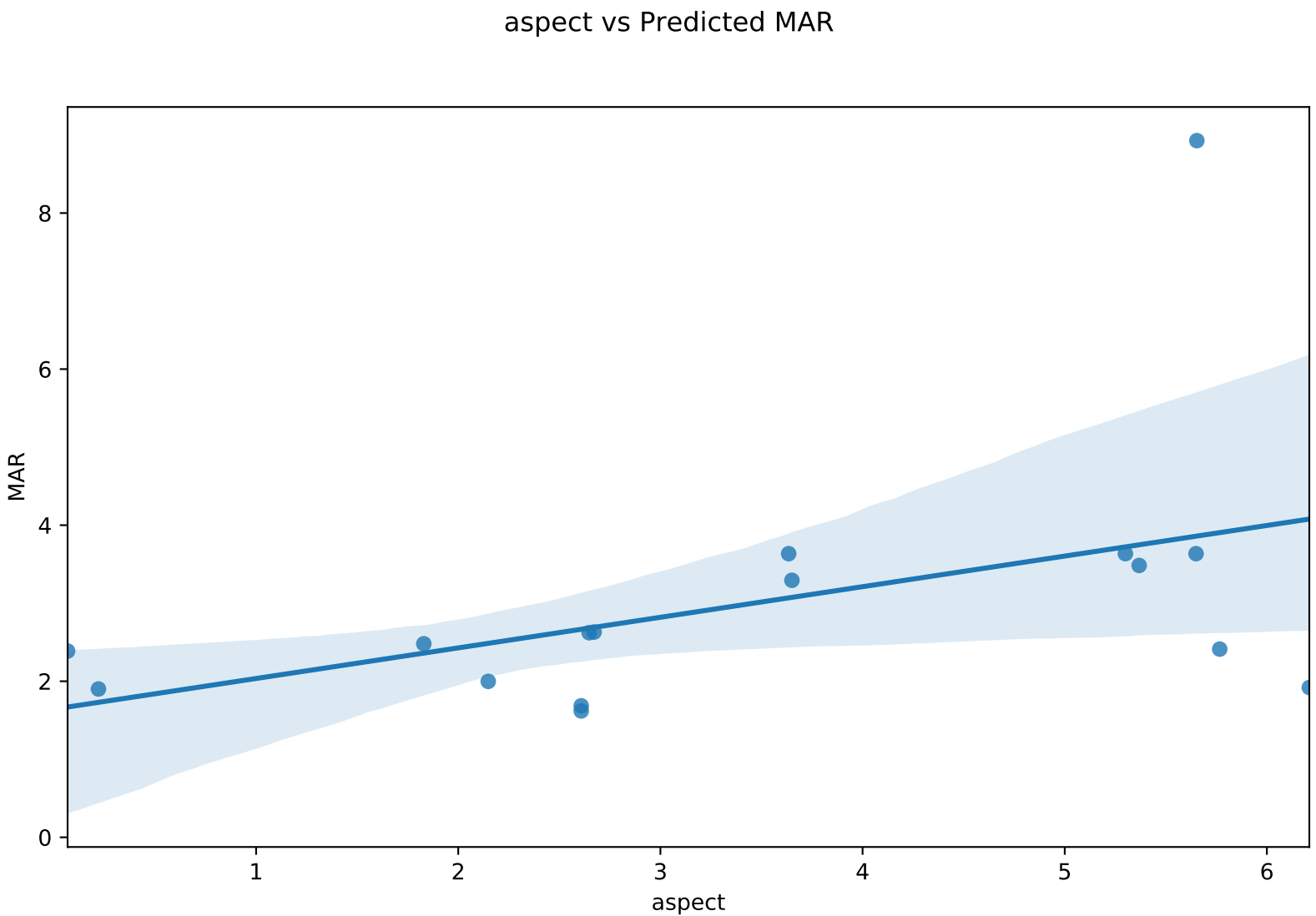

average_slope vs Predicted MAR
MAR
average_slope
9
8
7
6
5
4
3
2
1
5
10
15
20
25
30
35
40

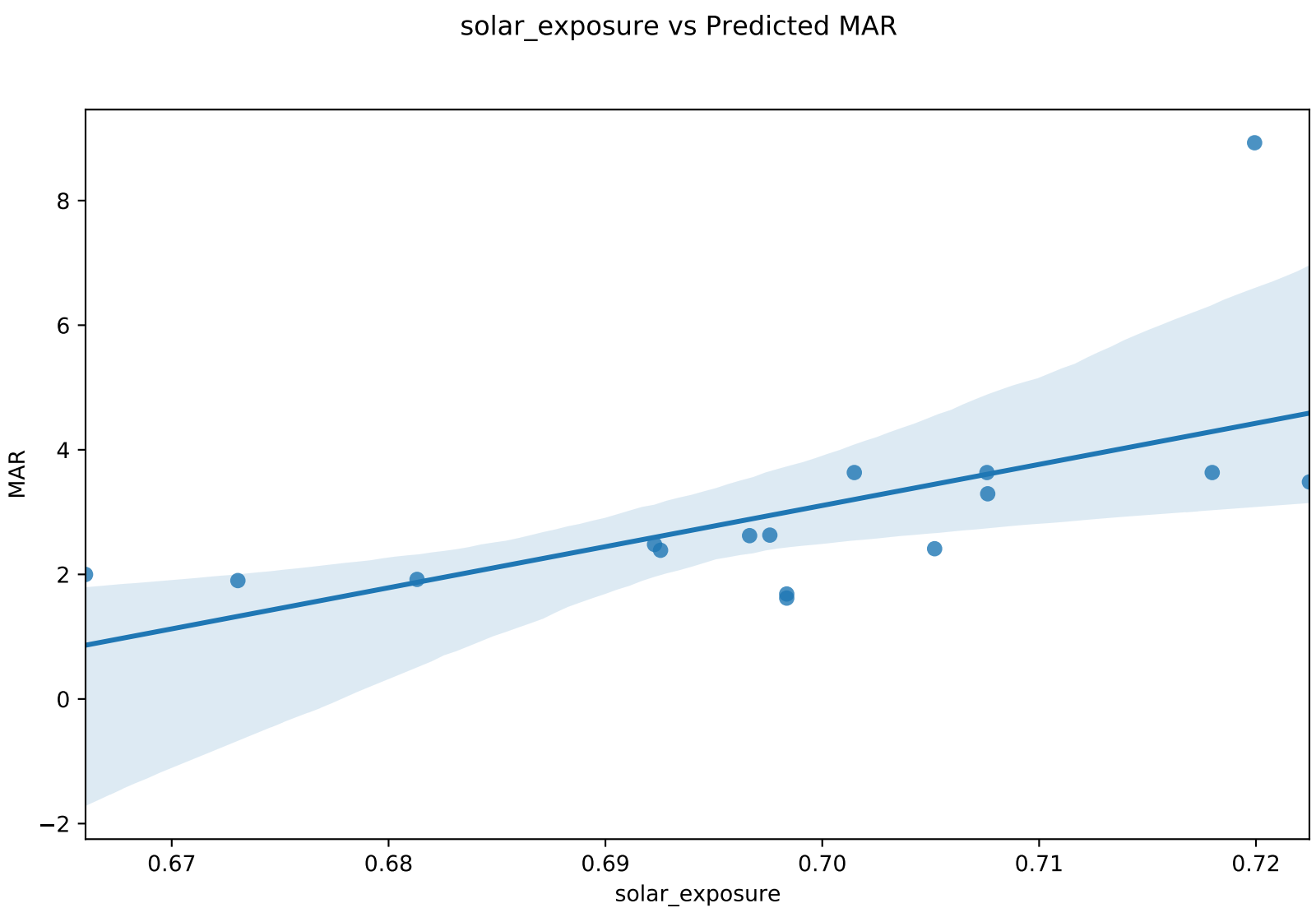

glacial_coverage vs Predicted MAR
MAR
glacial_coverage
9
8
7
6
5
4
3
2
−0.04
−0.02
0.00
0.02
0.04


potential_evapotranspiration_thornthwaite vs Predicted MAR
MAR
potential_evapotranspiration_thornthwaite
0
2
4
6
8
450
460
470
480
490
500
510


annual_precipitation vs Predicted MAR
MAR
0
2
4
6
8
550
600
650
700
750
800
annual_precipitation


median_elevation vs Predicted MAR
MAR
median_elevation
1
2
3
4
5
6
7
8
9
1300
1400
1500
1600
1700


aspect vs Predicted MAR
MAR
aspect
0
2
4
6
8
1
2
3
4
5
6


solar_exposure vs Predicted MAR
MAR
8
6
4
2
0
−2
0.67
0.68
0.69
0.70
0.71
0.72
solar_exposure