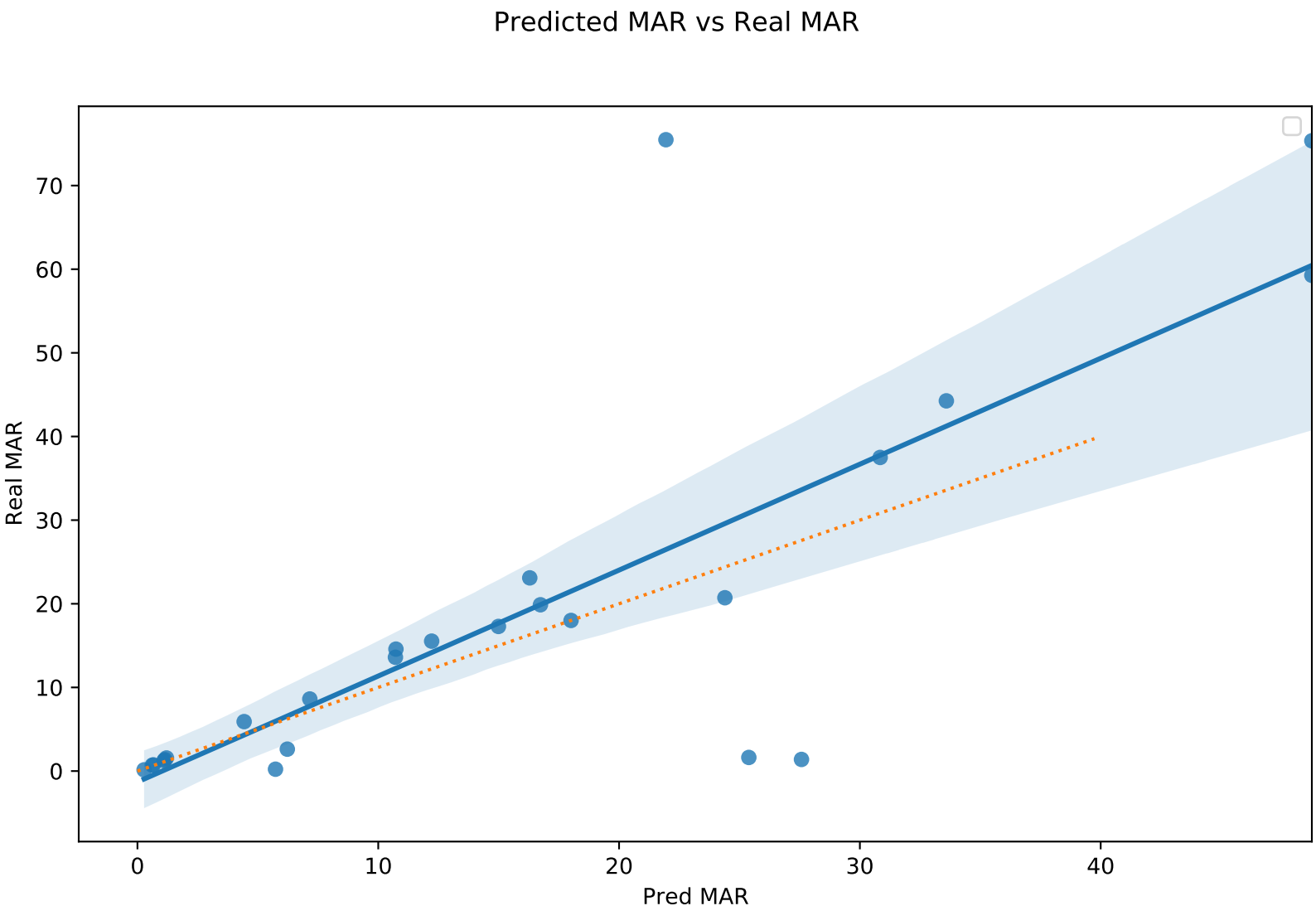
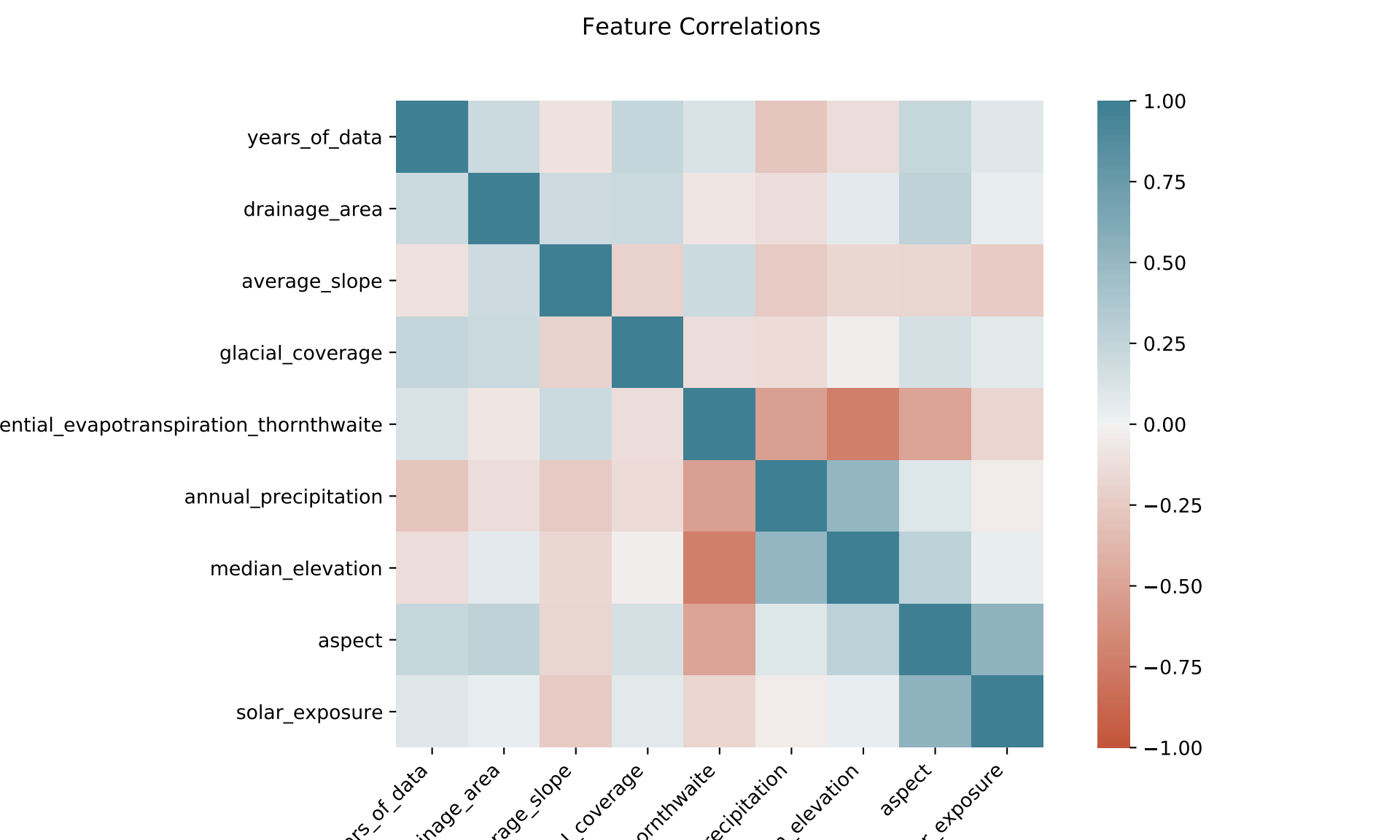
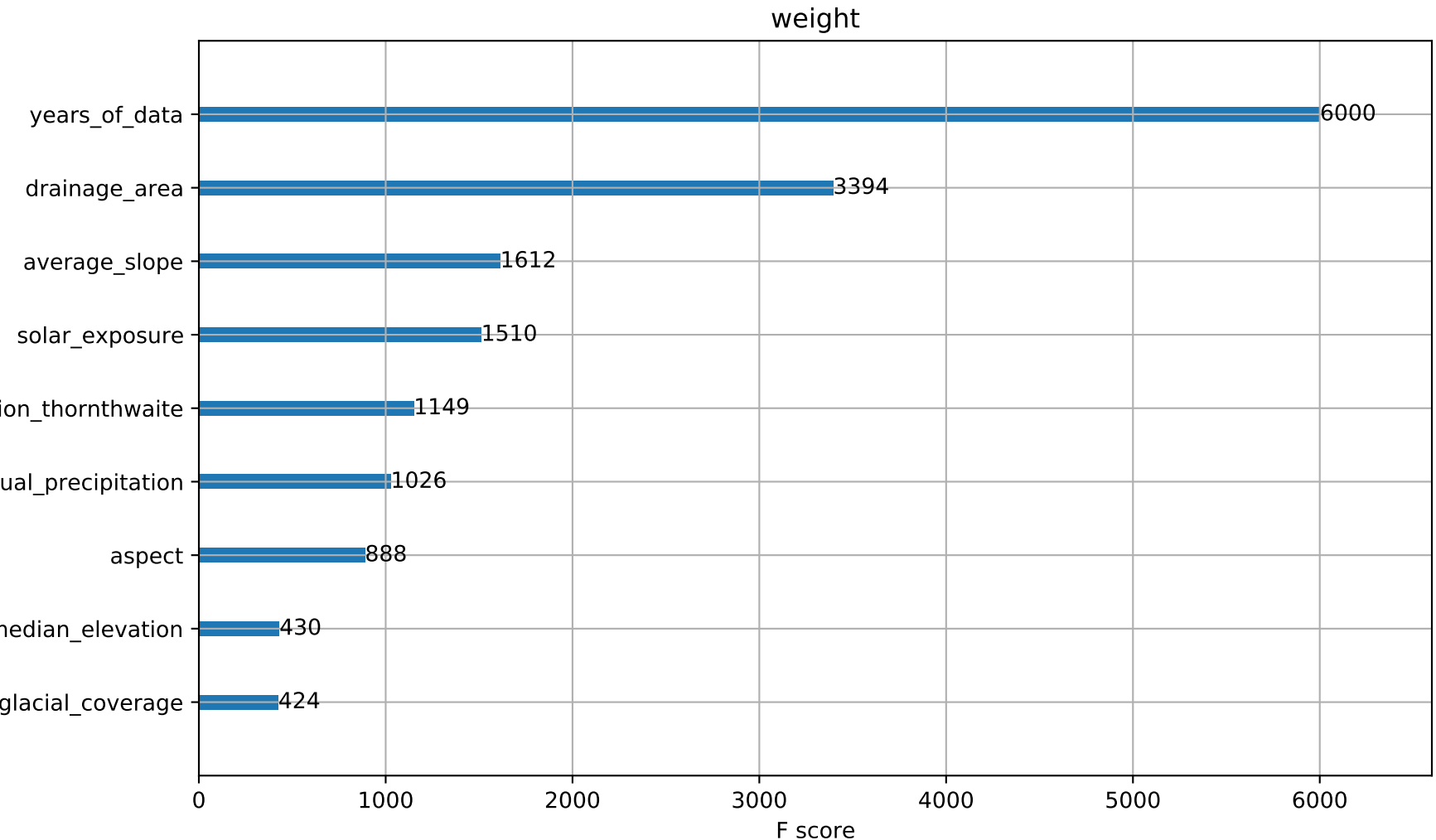
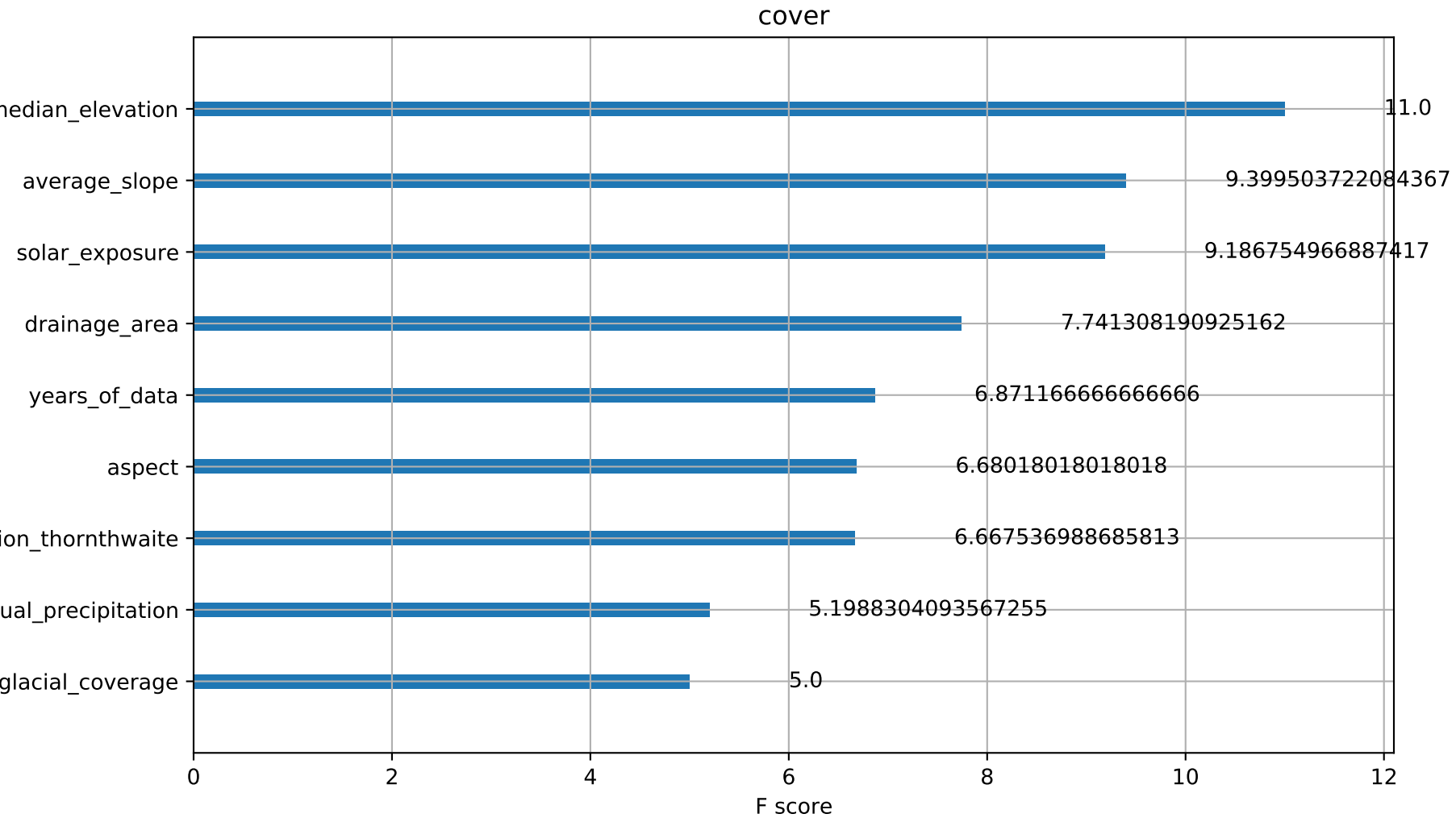
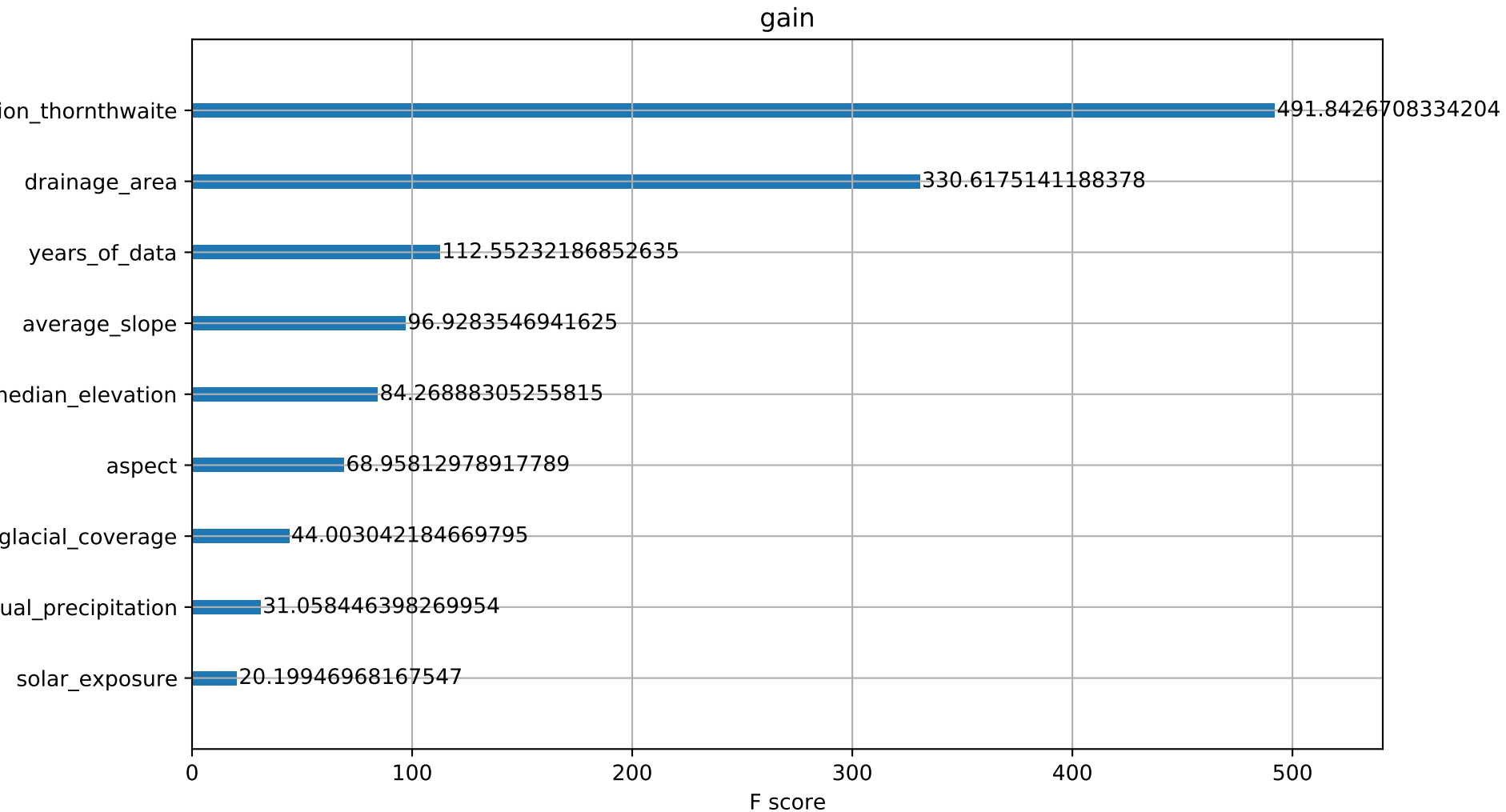
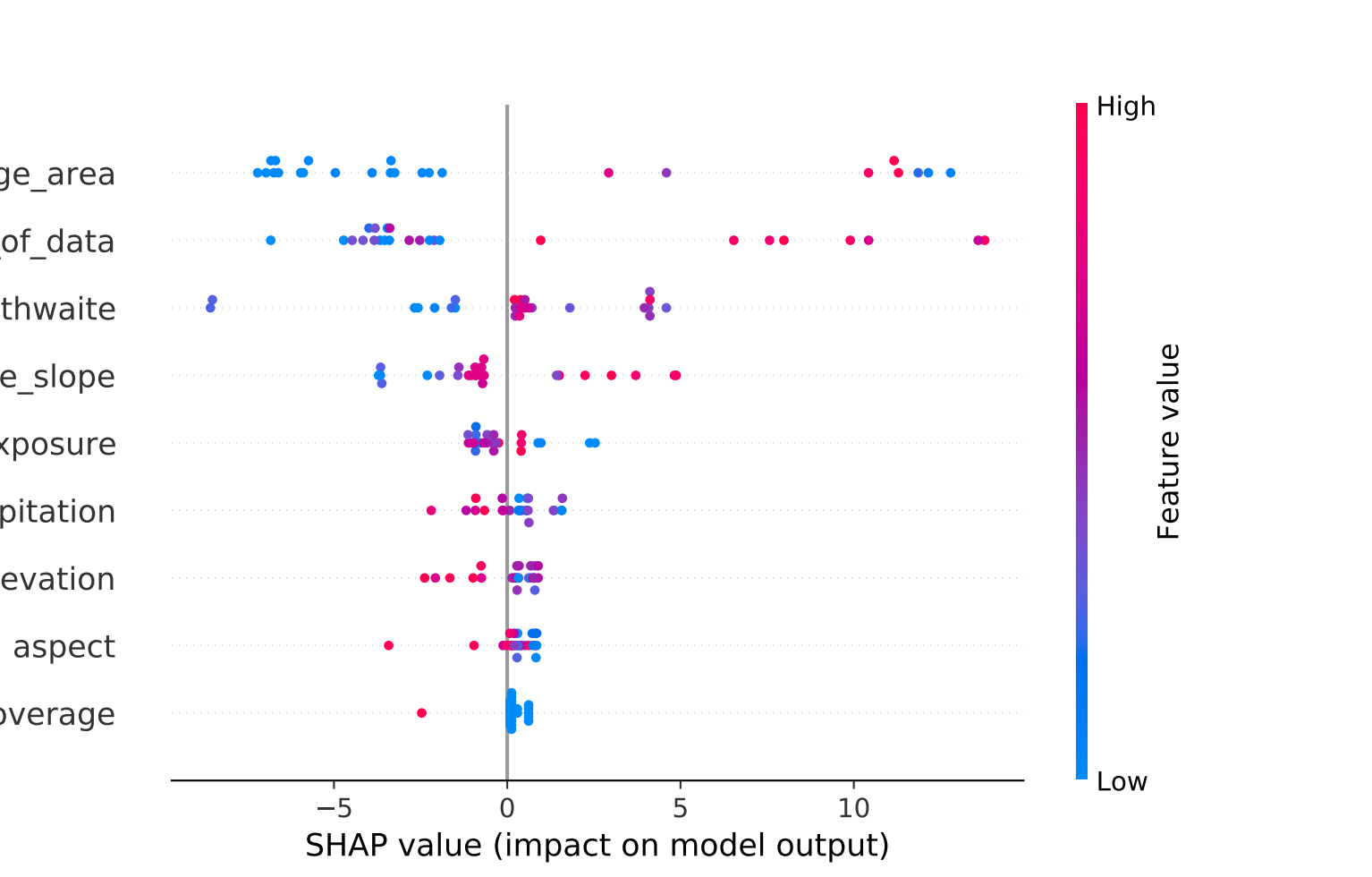

Predicted MAR vs Real MAR
Real MAR
Pred MAR
0
10
20
30
40
70
60
50
40
30
20
10
0


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

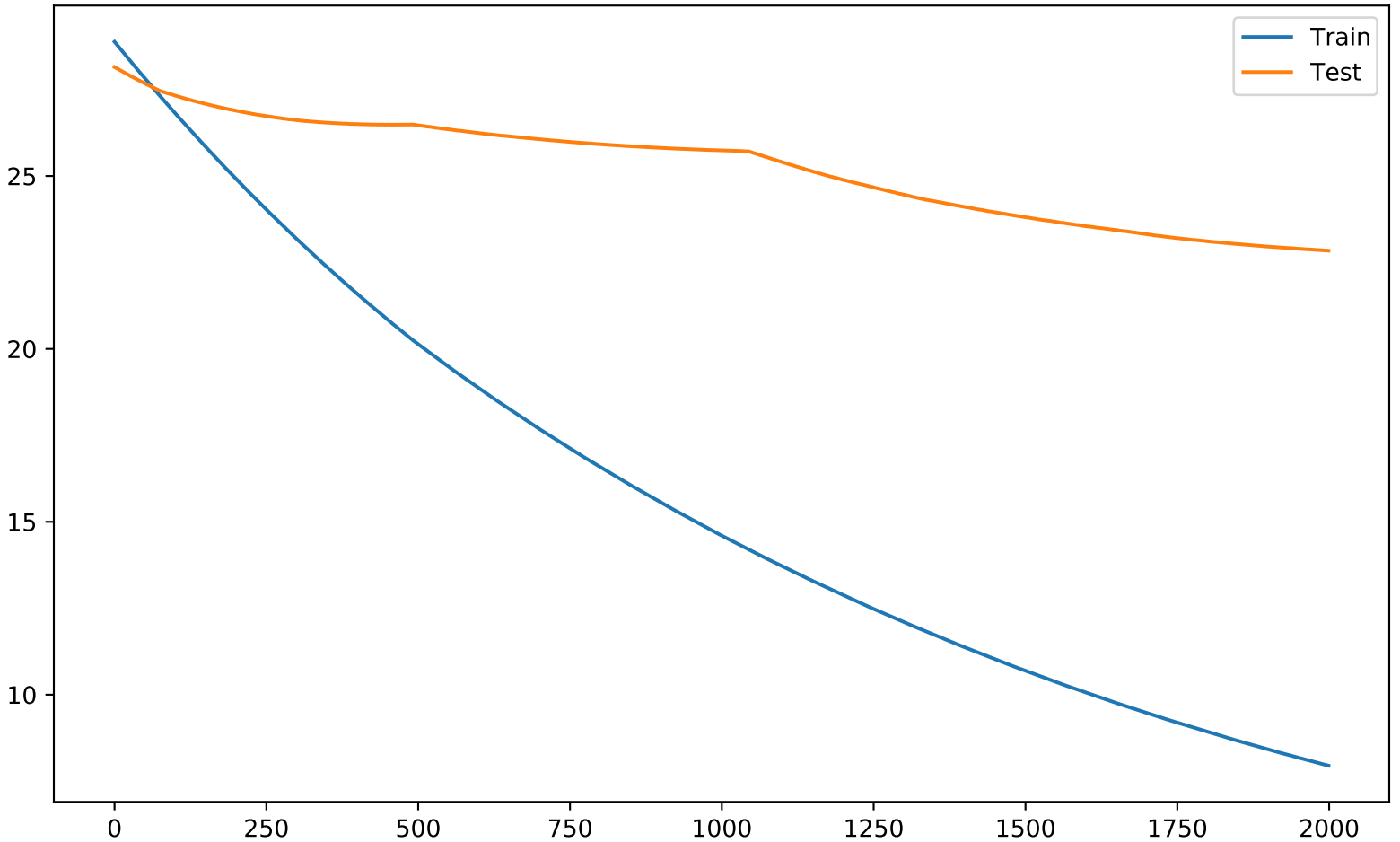

weight
years_of_data
drainage_area
average_slope
solar_exposure
ion_thornthwaite
ual_precipitation
aspect
nedian_elevation
glacial_coverage
6000
3394
1612
1510
1149
1026
888
430
424
0
1000
2000
3000
4000
5000
6000
F score

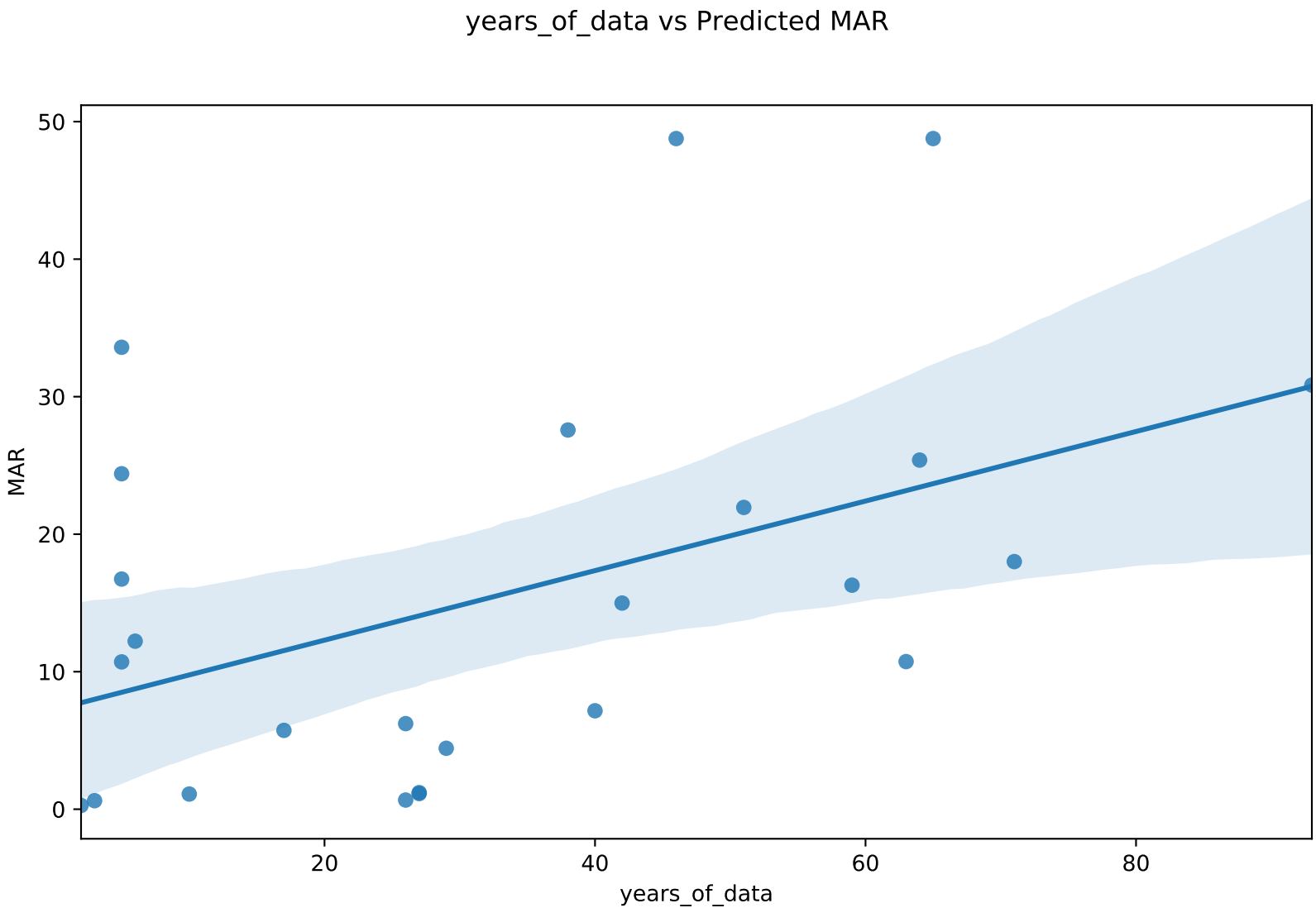

cover
median_elevation
average_slope
solar_exposure
drainage_area
years_of_data
aspect
ion_thornthwaite
ual_precipitation
glacial_coverage
11.0
9.399503722084367
9.186754966887417
7.741308190925162
6.871166666666666
6.68018018018018
6.667536988685813
5.1988304093567255
5.0
0
2
4
6
8
10
12
F score

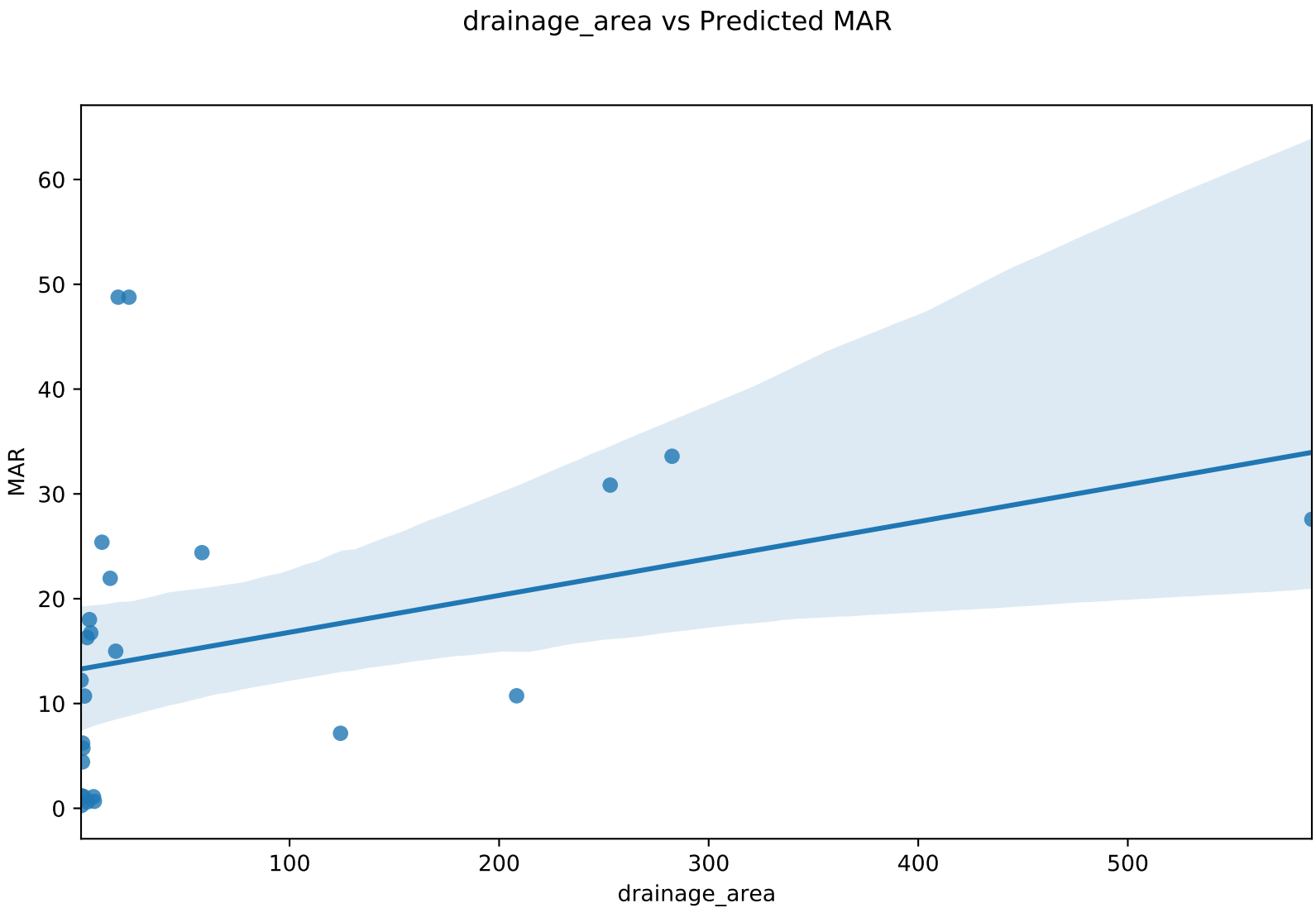

gain
ion_thornthwaite
drainage_area
years_of_data
average_slope
nedian_elevation
aspect
glacial_coverage
ual_precipitation
solar_exposure
491.8426708334204
330.6175141188378
112.55232186852635
96.9283546941625
84.26888305255815
68.95812978917789
44.003042184669795
31.058446398269954
20.19946968167547
0
100
200
300
400
500
F score

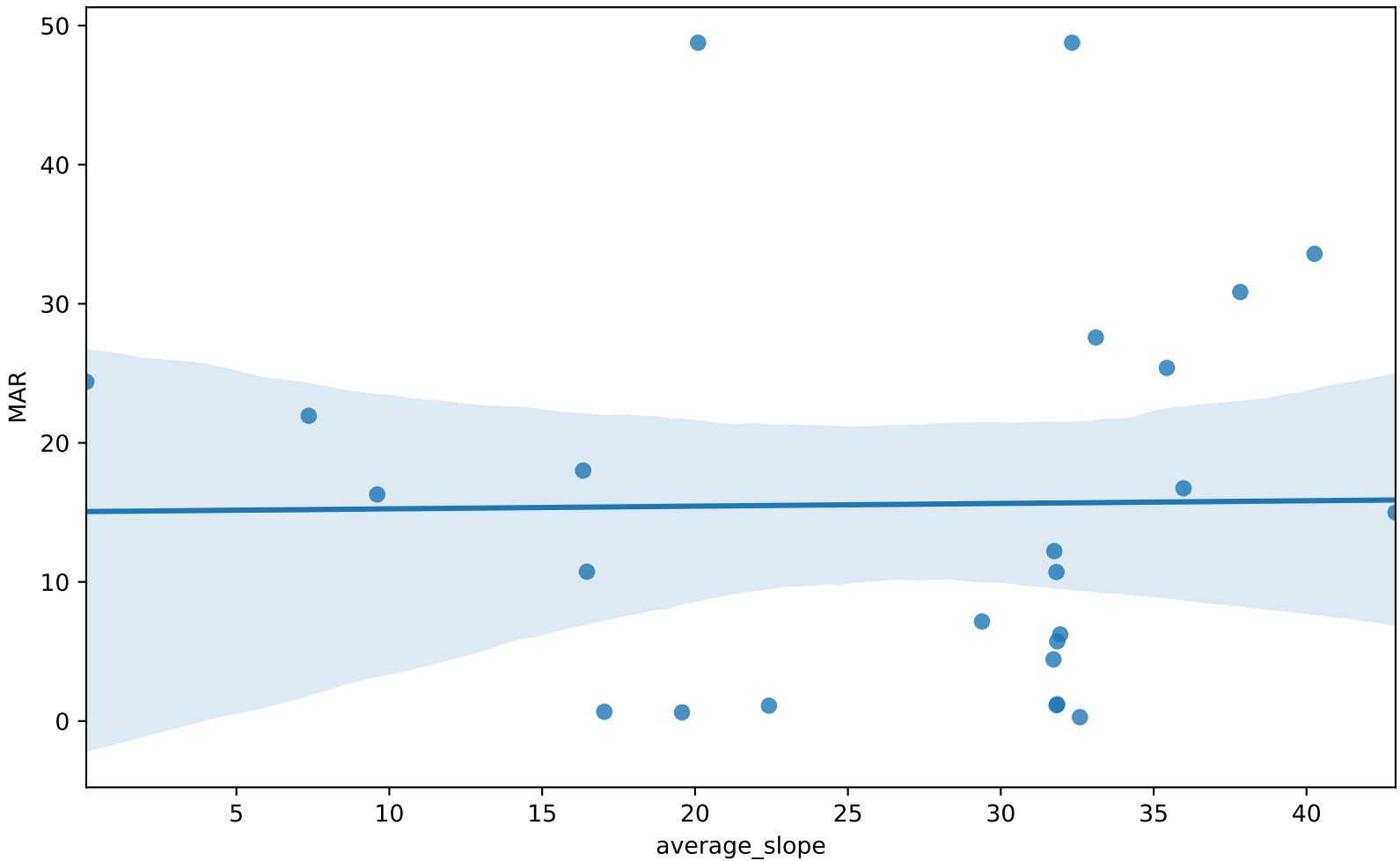

ge_area
of_data
thwaite
e_slope
xposure
pitation
evation
aspect
overage
−5
0
5
10
SHAP value (impact on model output)
High
Feature value
Low

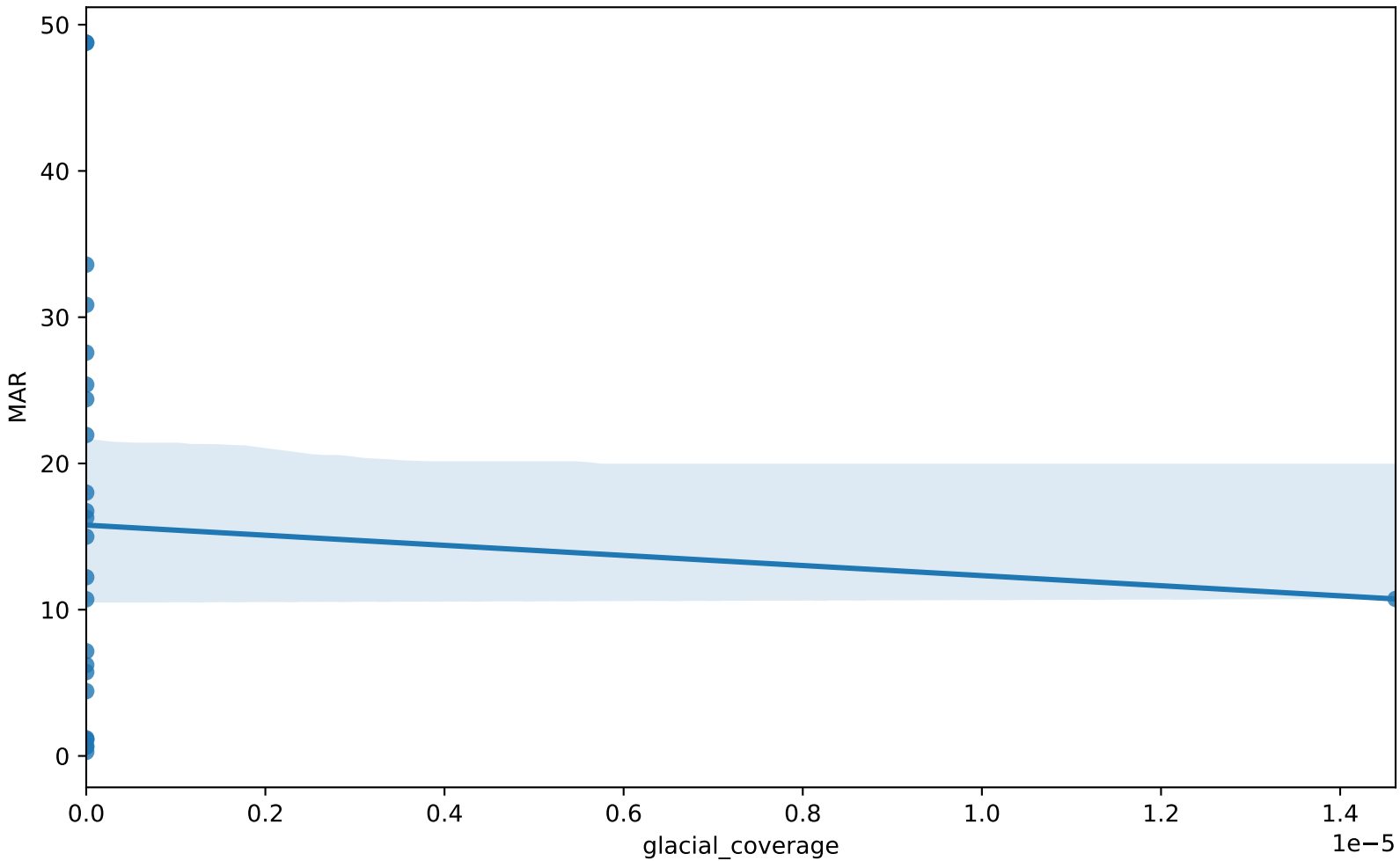
RMSE: 14.488857217161316 R2: 0.5804907480969755

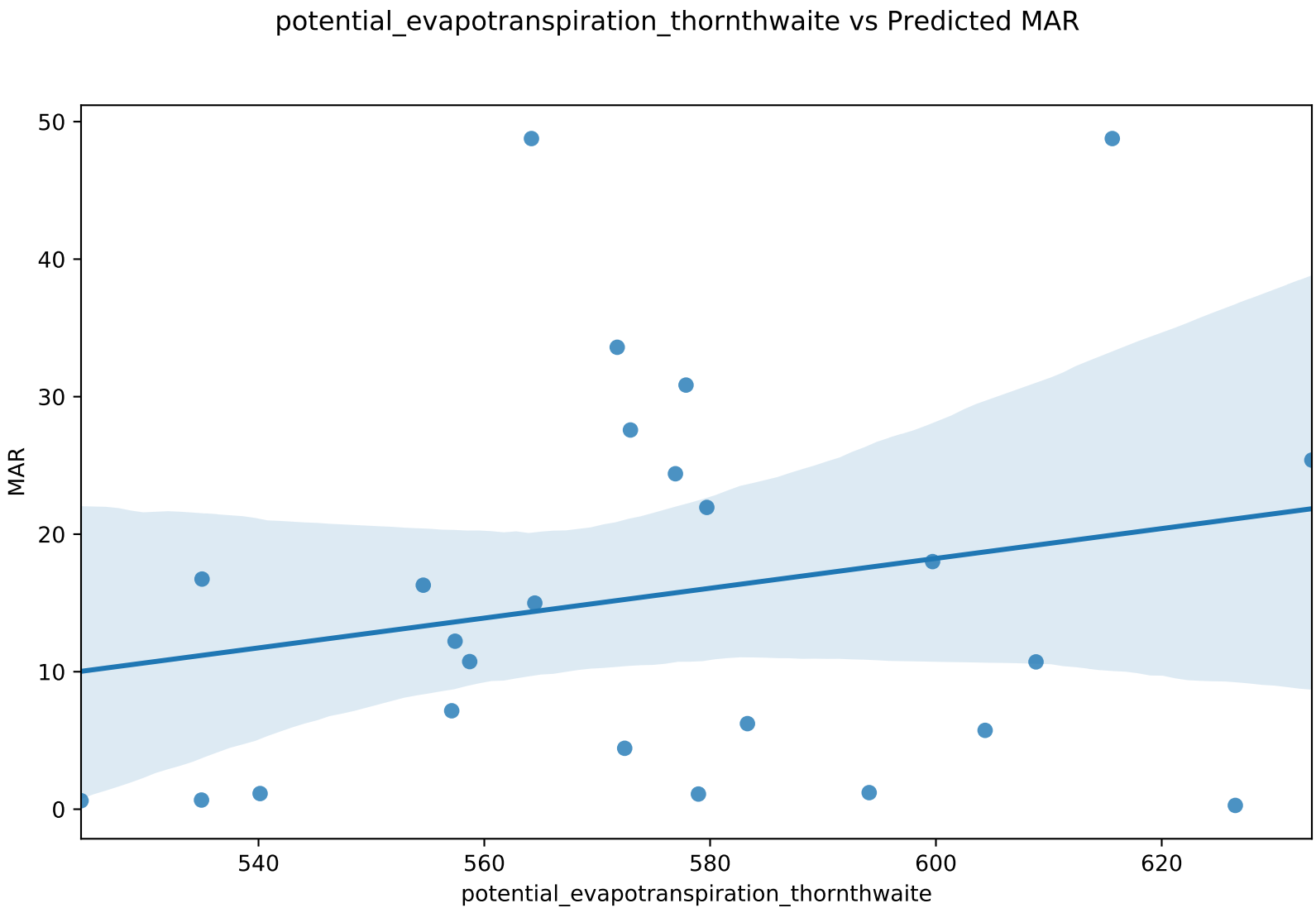


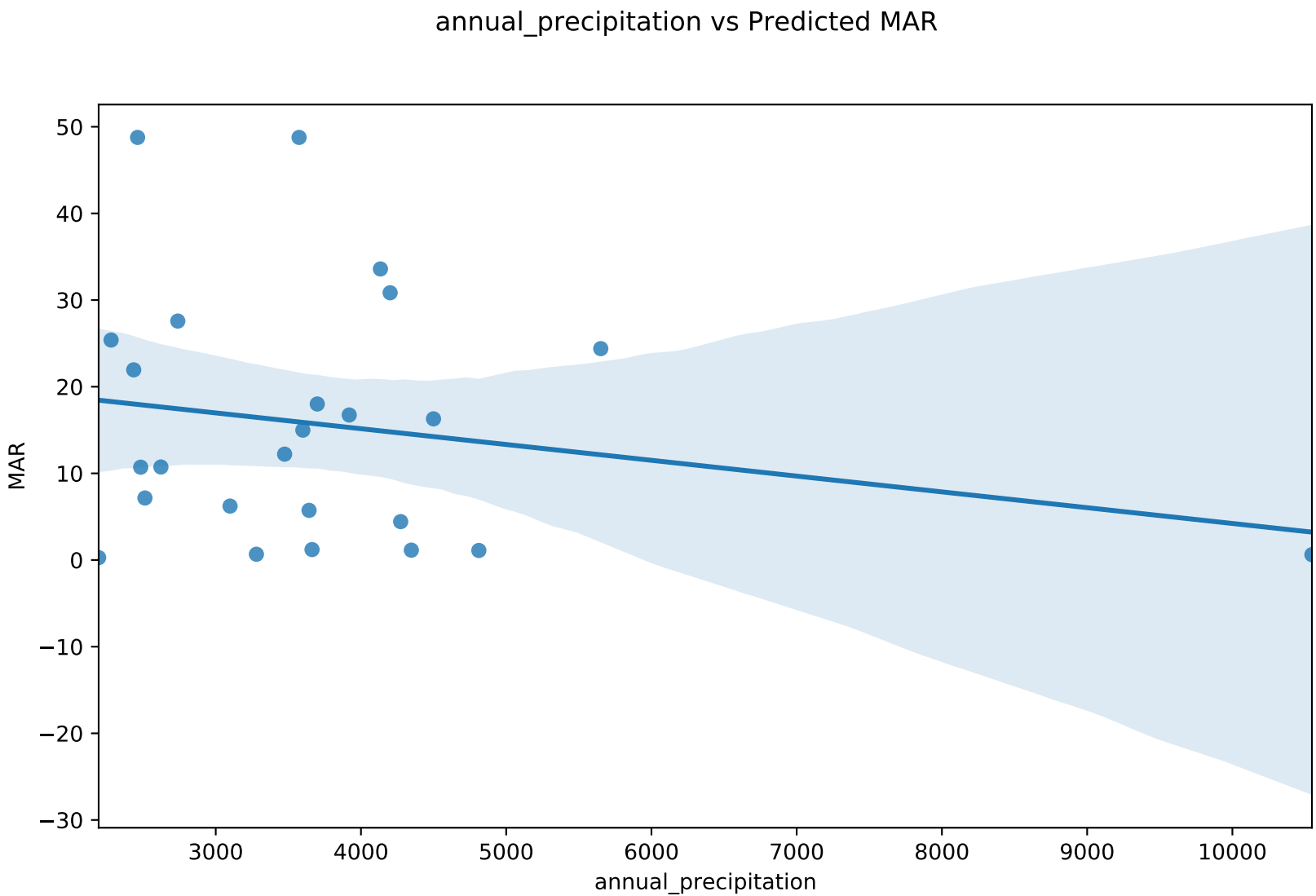

years_of_data vs Predicted MAR
MAR
years_of_data
0
10
20
30
40
50
20
40
60
80

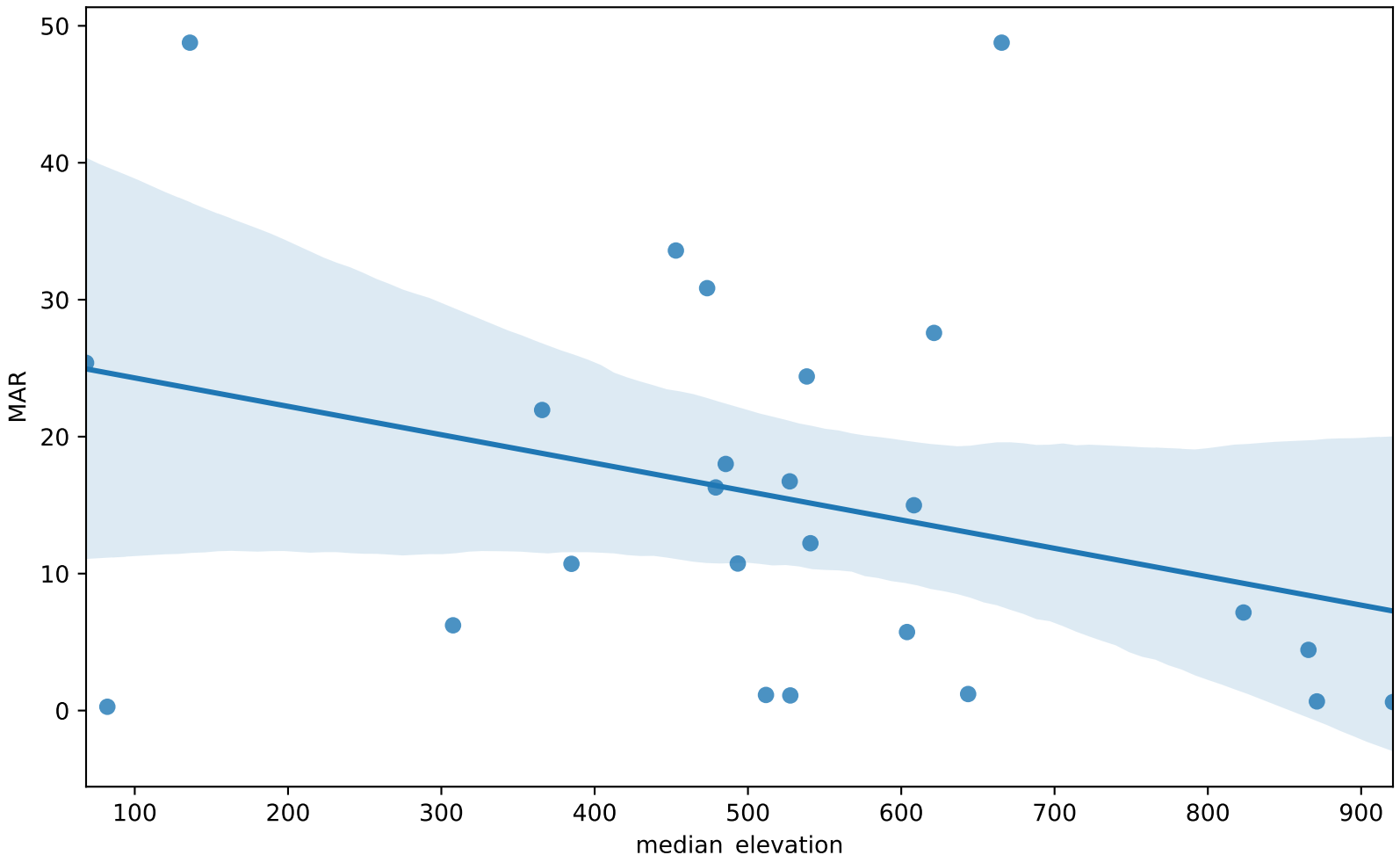

drainage_area vs Predicted MAR
MAR
drainage_area
0
10
20
30
40
50
60
100
200
300
400
500

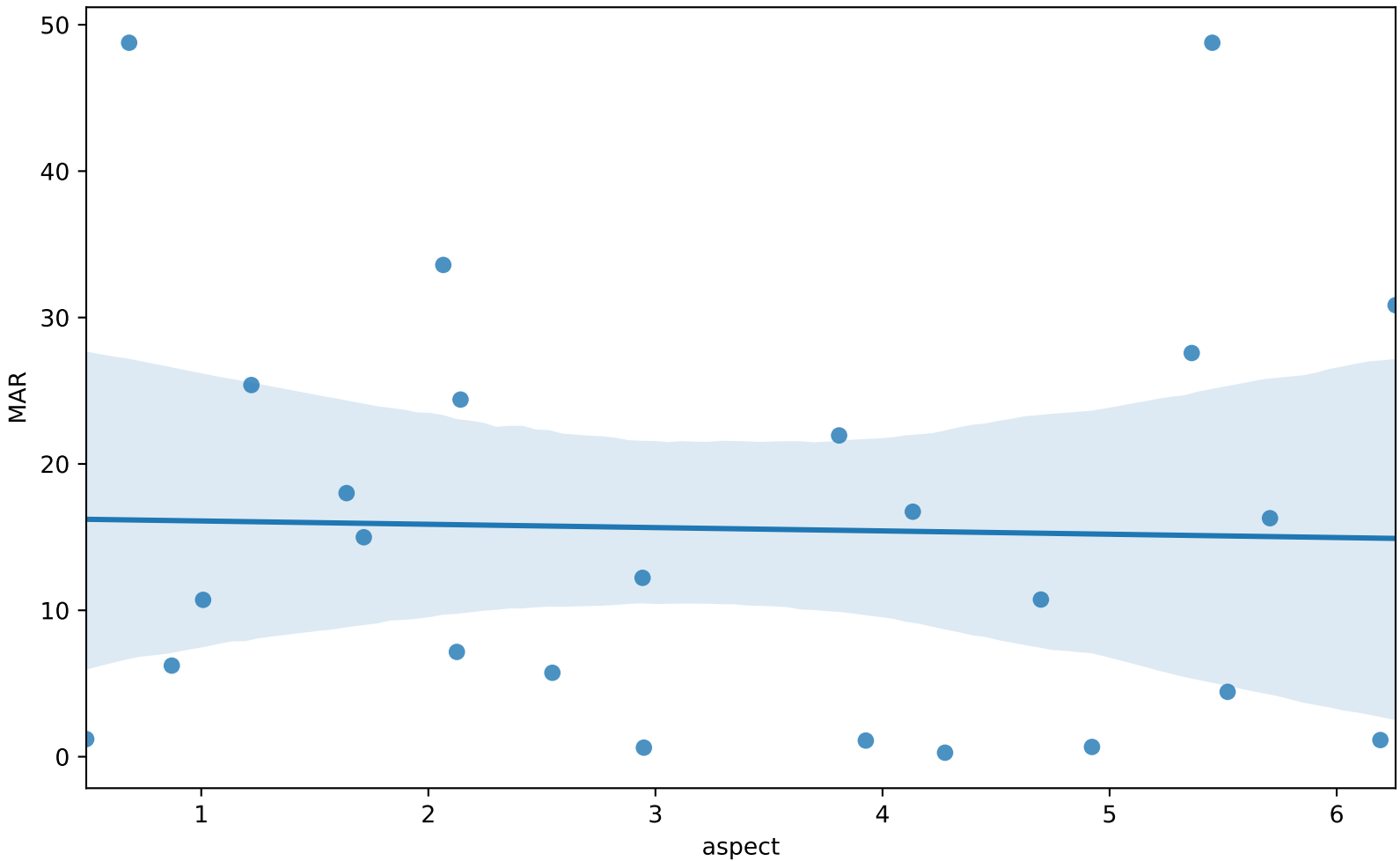

average_slope vs Predicted MAR
MAR
average_slope
50
40
30
20
10
0
5
10
15
20
25
30
35
40

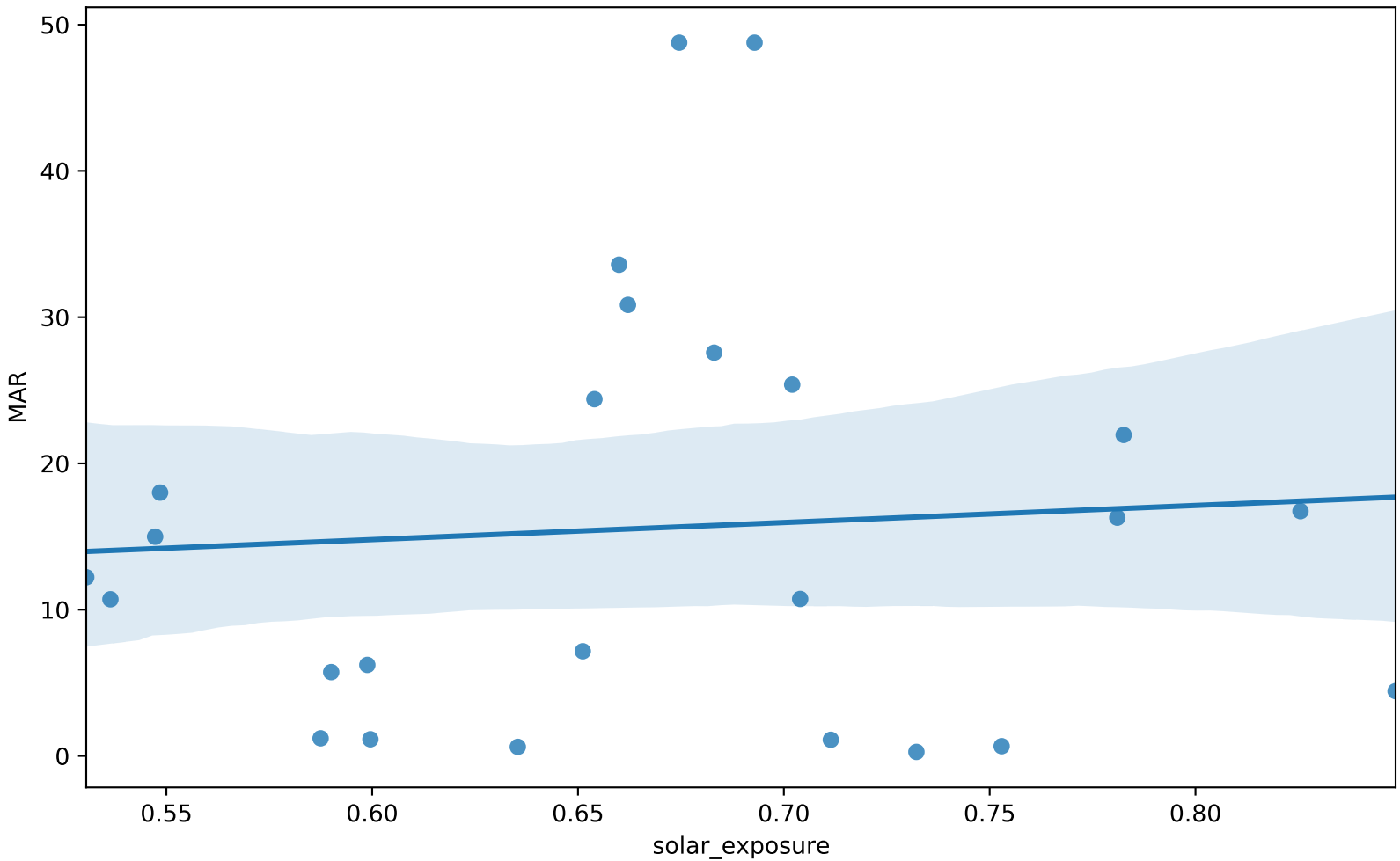

glacial_coverage vs Predicted MAR
MAR
50
40
30
20
10
0
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
glacial_coverage
1e−5


potential_evapotranspiration_thornthwaite vs Predicted MAR
MAR
potential_evapotranspiration_thornthwaite
0
10
20
30
40
50
540
560
580
600
620


annual_precipitation vs Predicted MAR
MAR
annual_precipitation
50
40
30
20
10
0
−10
−20
−30
3000
4000
5000
6000
7000
8000
9000
10000


median_elevation vs Predicted MAR
MAR
median_elevation
50
40
30
20
10
0
100
200
300
400
500
600
700
800
900


aspect vs Predicted MAR
MAR
aspect
0
10
20
30
40
50
1
2
3
4
5
6


solar_exposure vs Predicted MAR
MAR
50
40
30
20
10
0
0.55
0.60
0.65
0.70
0.75
0.80
solar_exposure