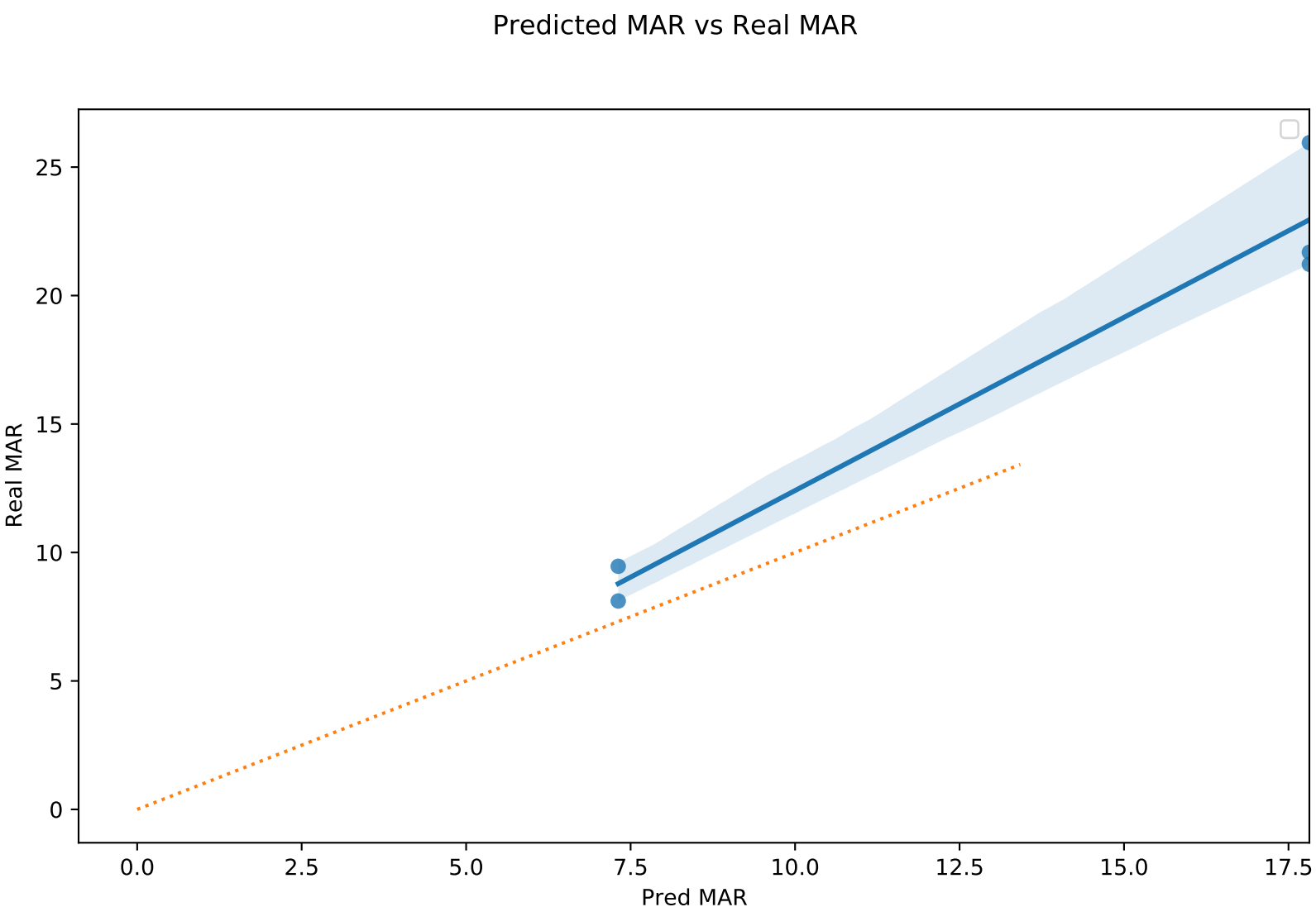
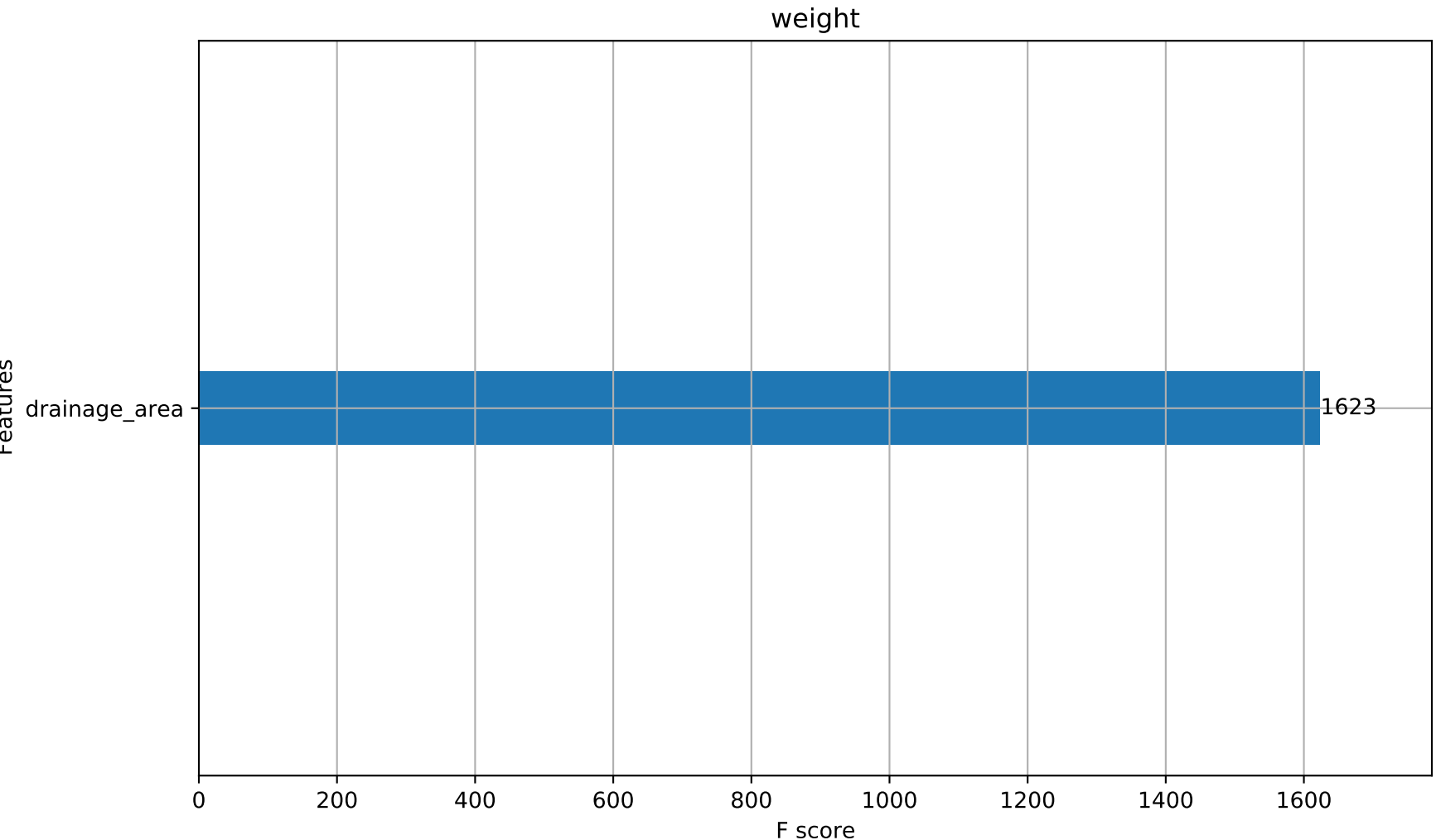
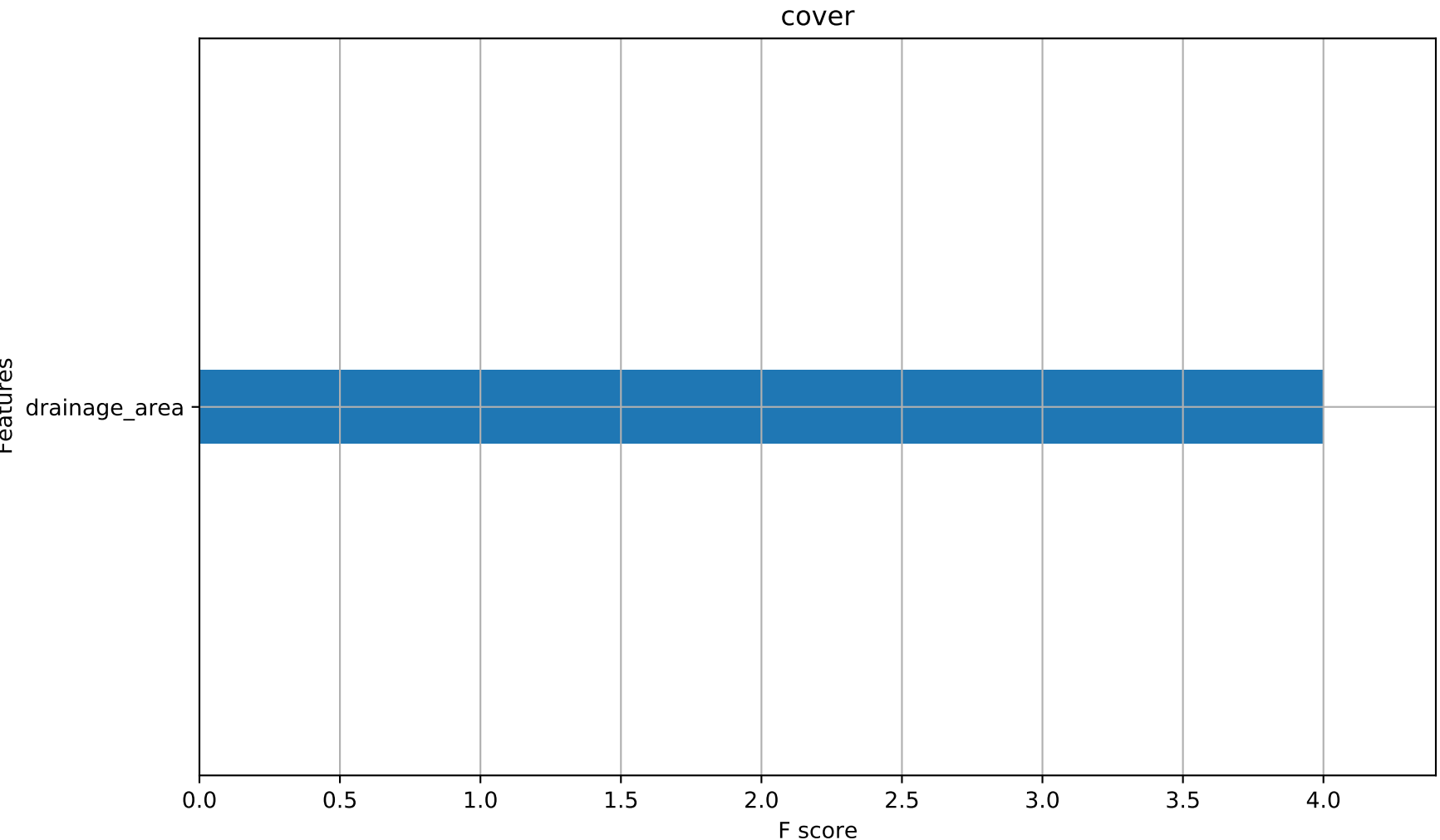
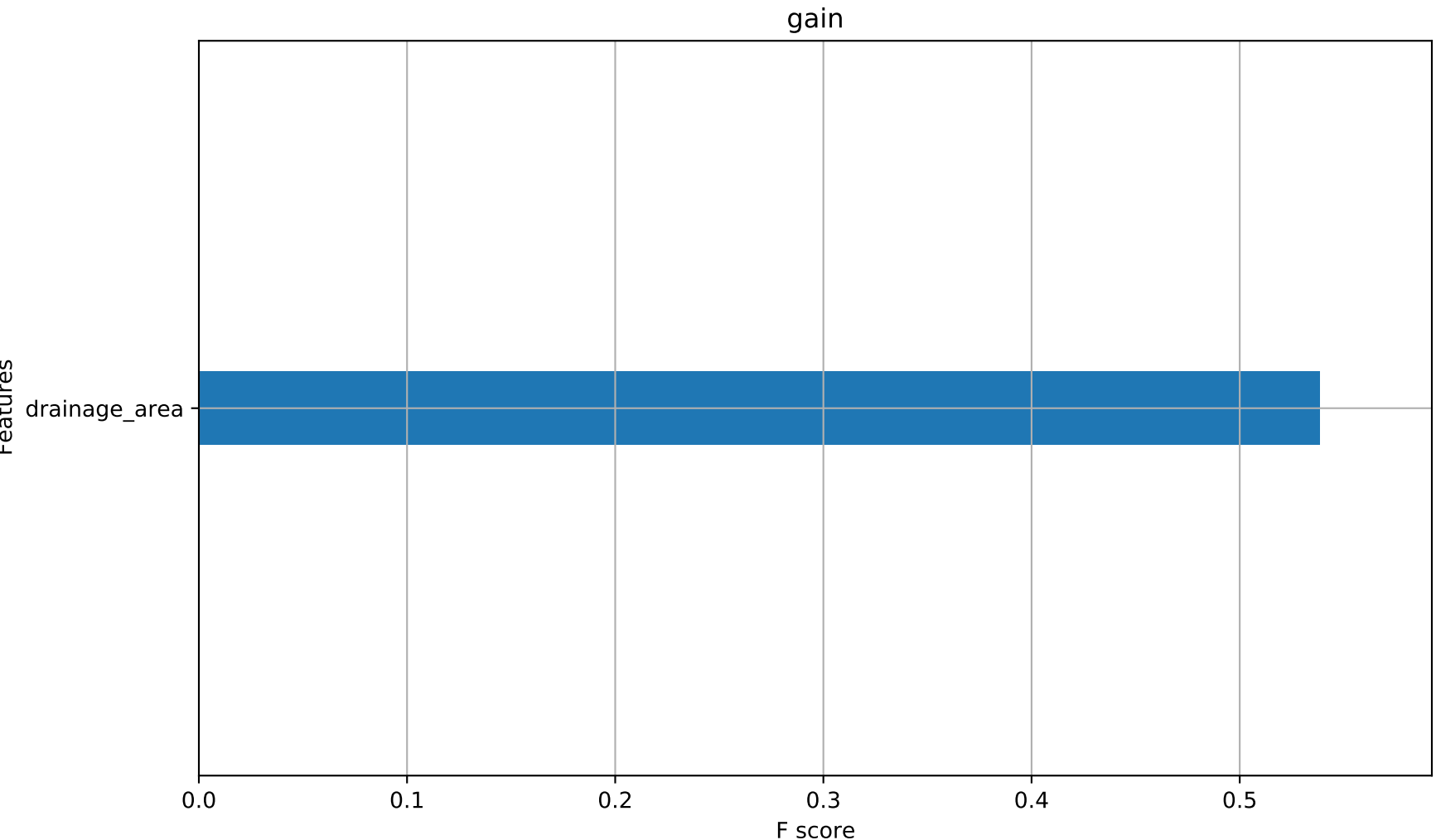
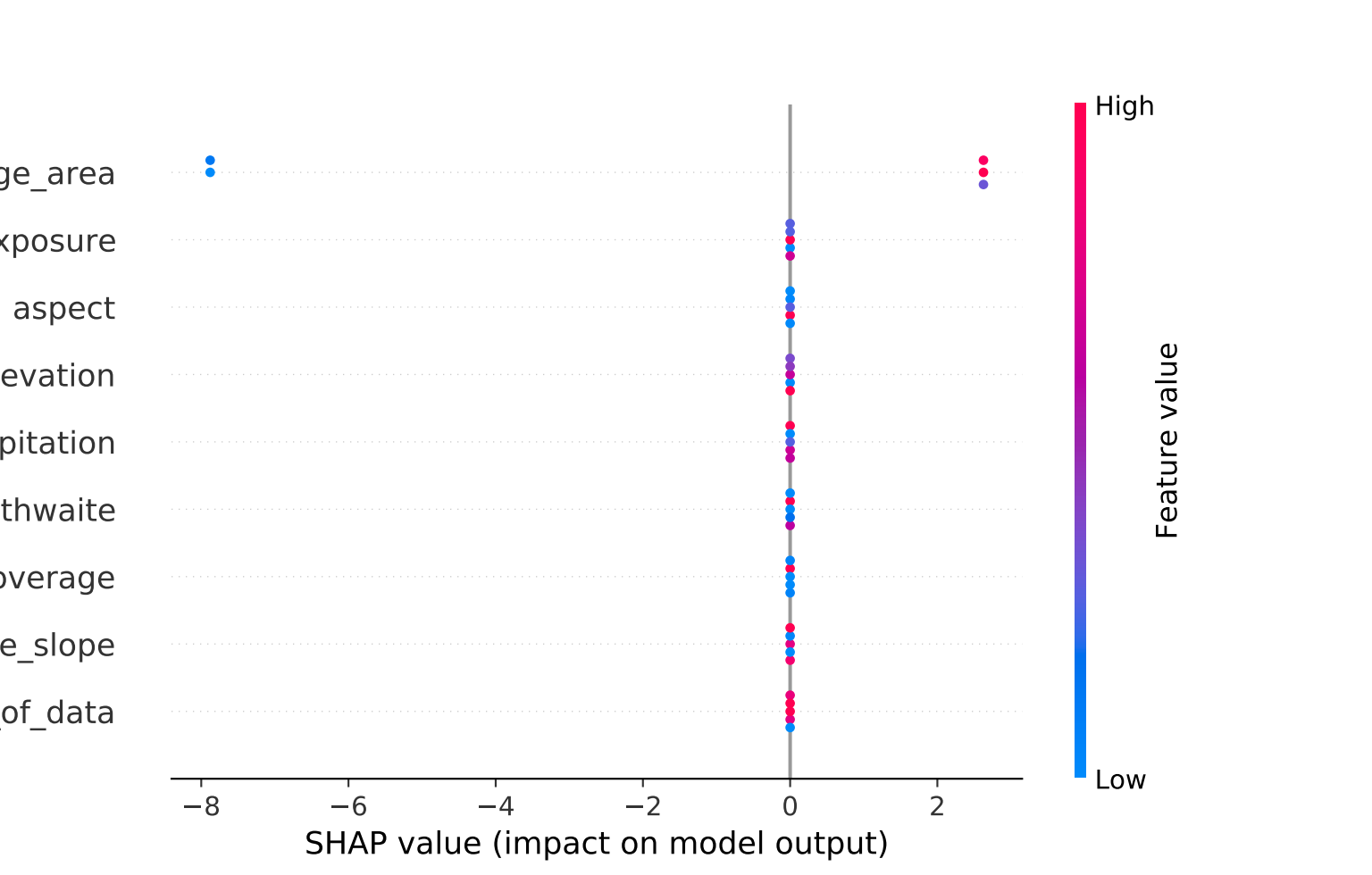

Predicted MAR vs Real MAR
Real MAR
Pred MAR
0
5
10
15
20
25
0.0
2.5
5.0
7.5
10.0
12.5
15.0
17.5

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
aspect

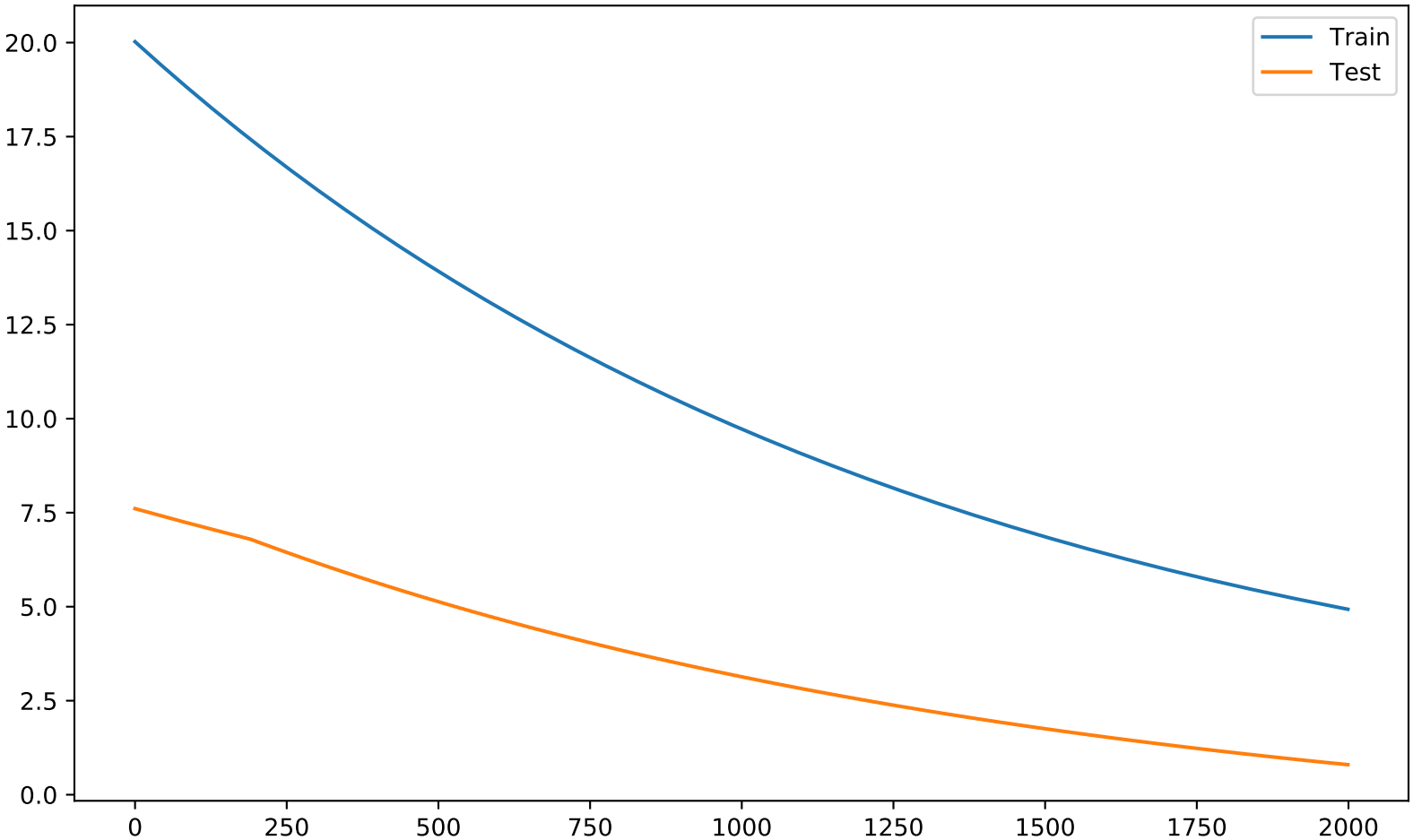

weight
Features
drainage_area
1623
0
200
400
600
800
1000
1200
1400
1600
F score

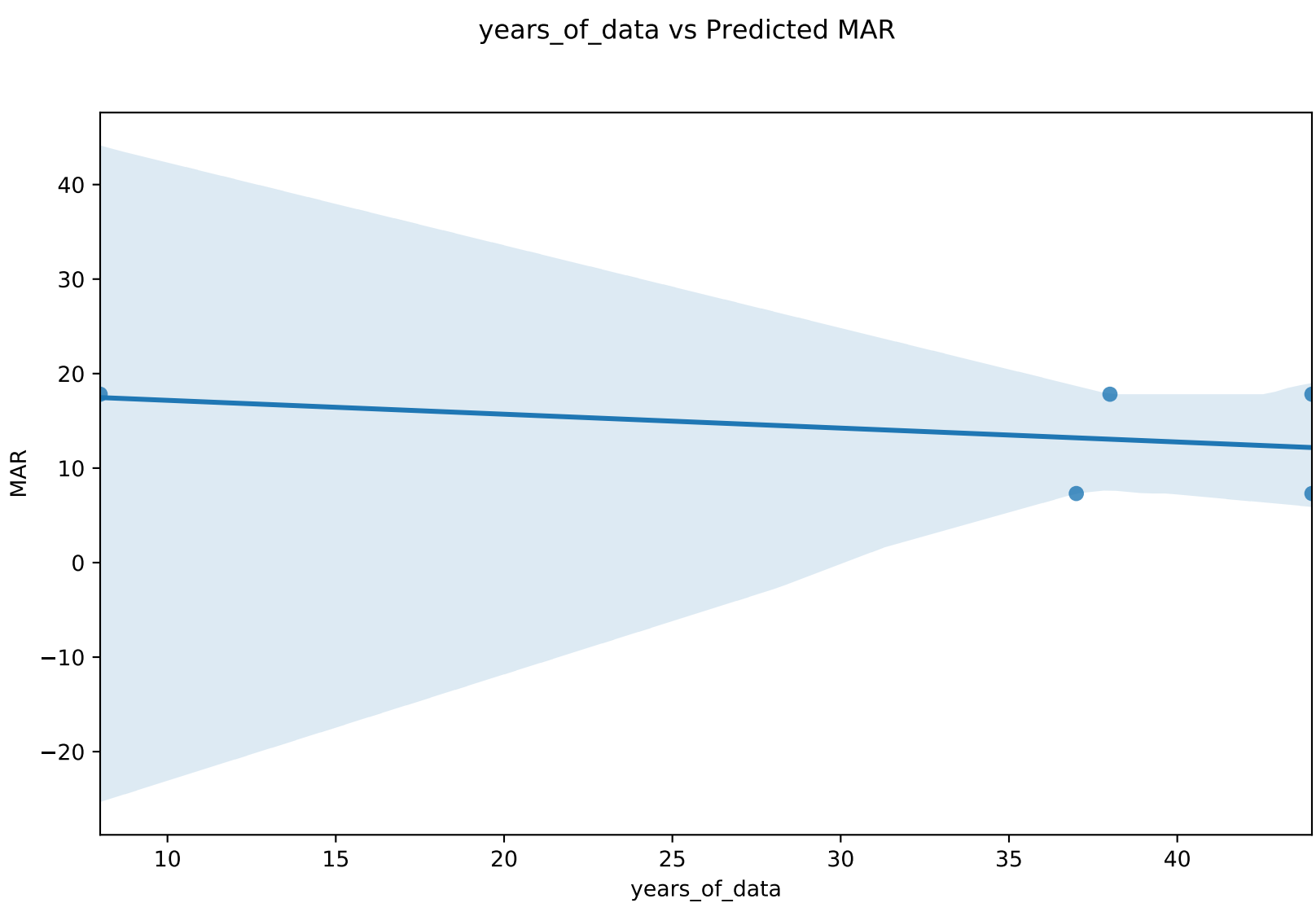

cover
Features
drainage_area
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
F score

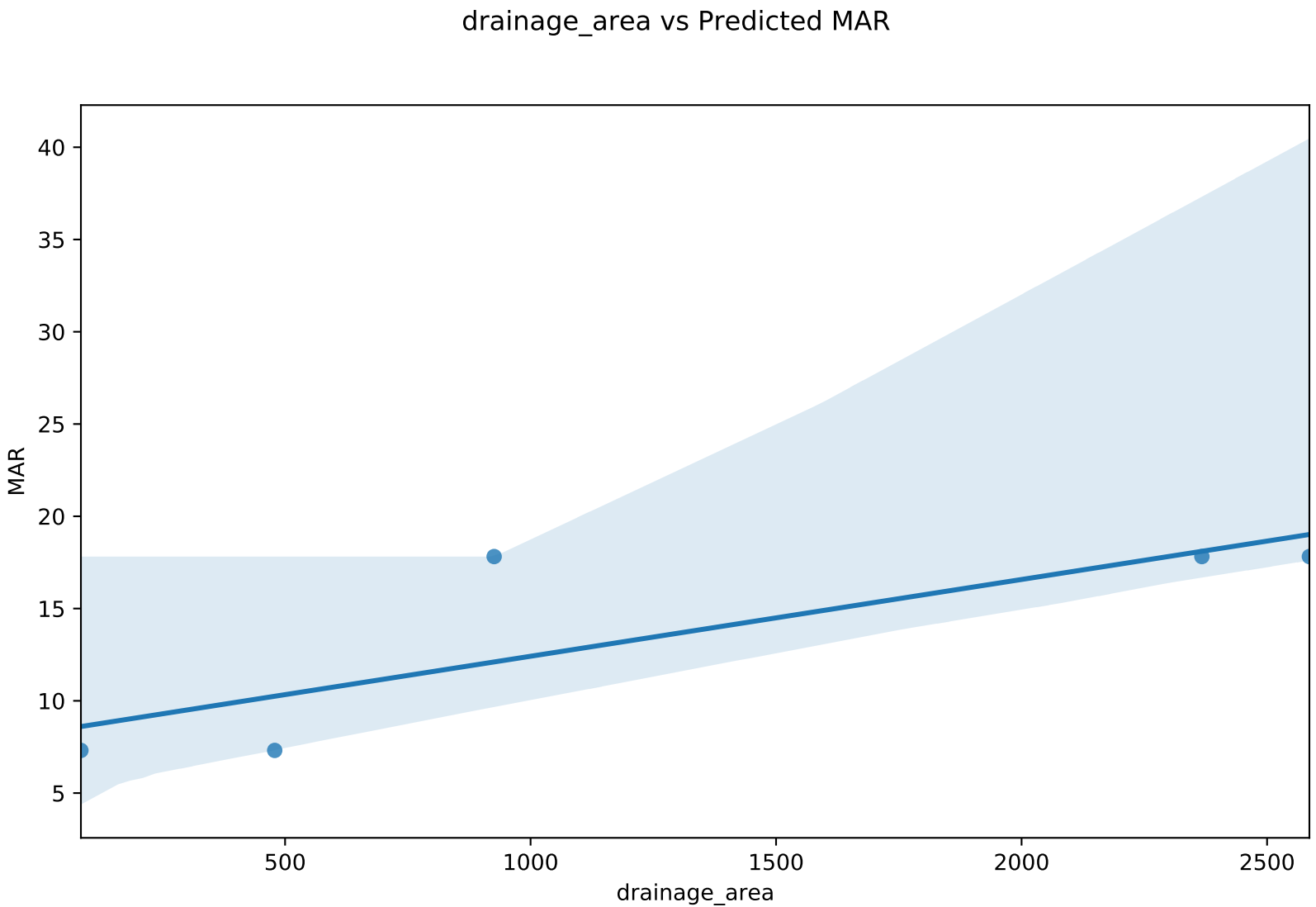

gain
Features
drainage_area
0.0
0.1
0.2
0.3
0.4
0.5
F score

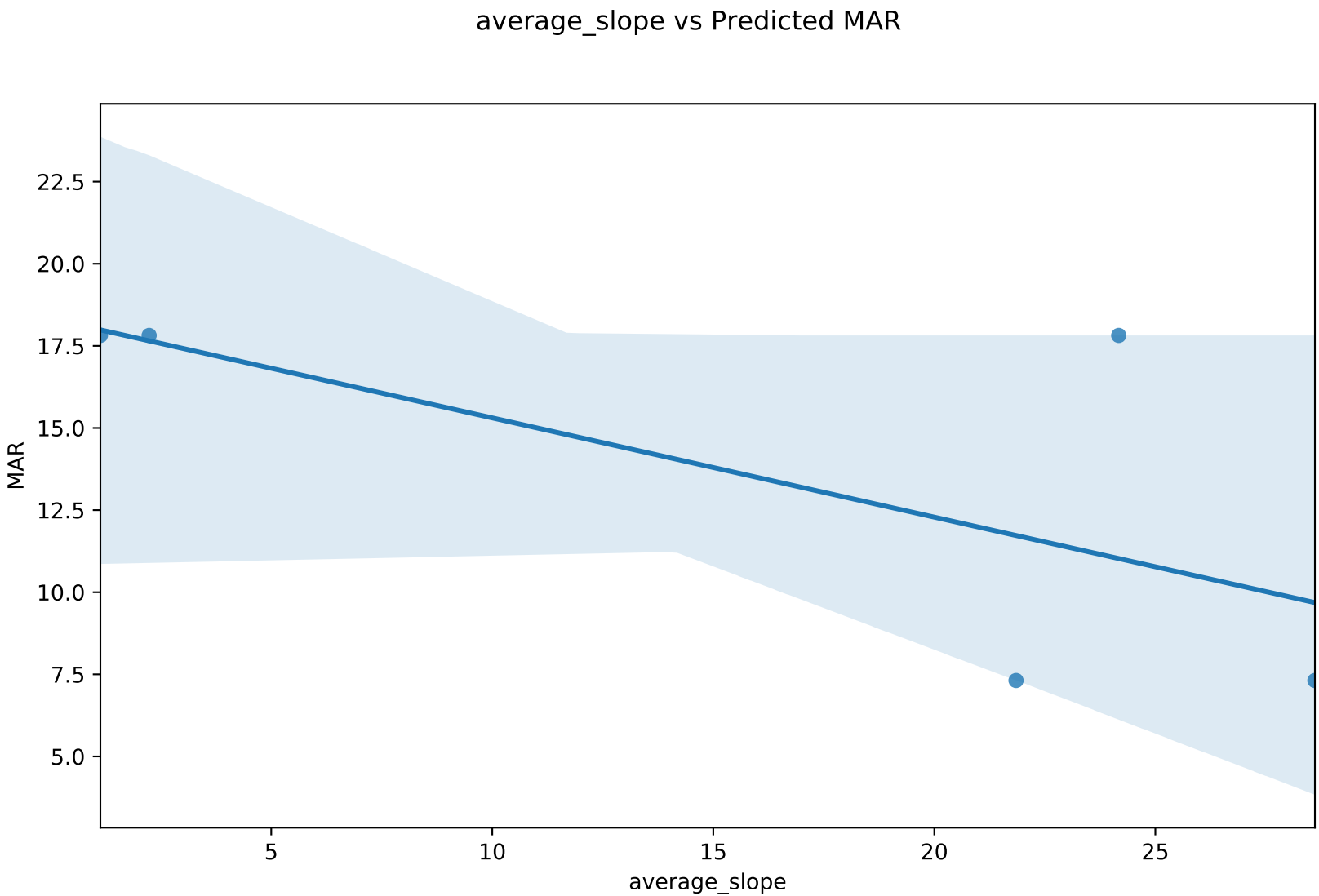

ge_area
xposure
aspect
evation
pitation
thwaite
overage
e_slope
of_data
−8
−6
−4
−2
0
2
SHAP value (impact on model output)
High
Feature value
Low

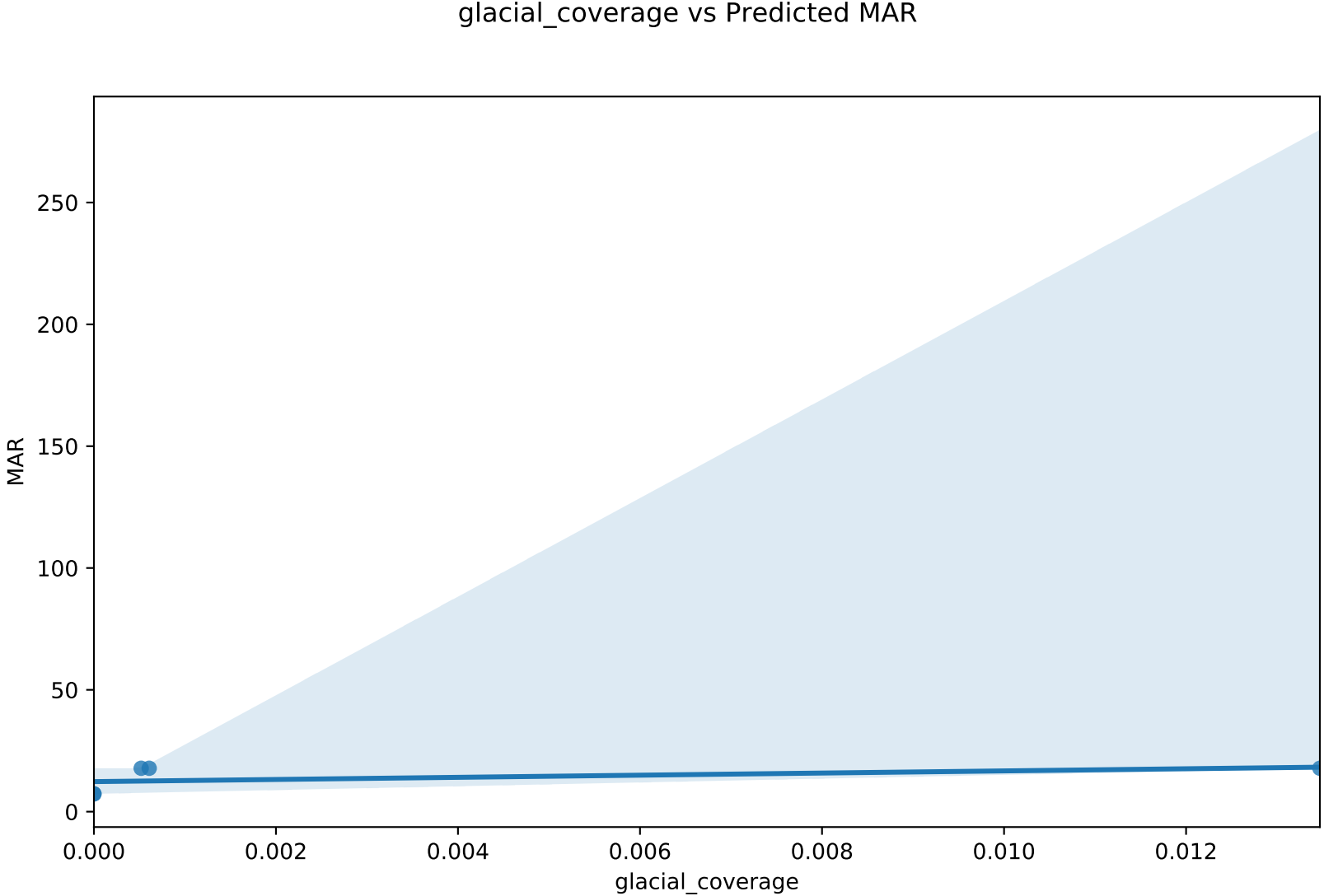
RMSE: 4.425423382055177 R2: 0.6163972846106951

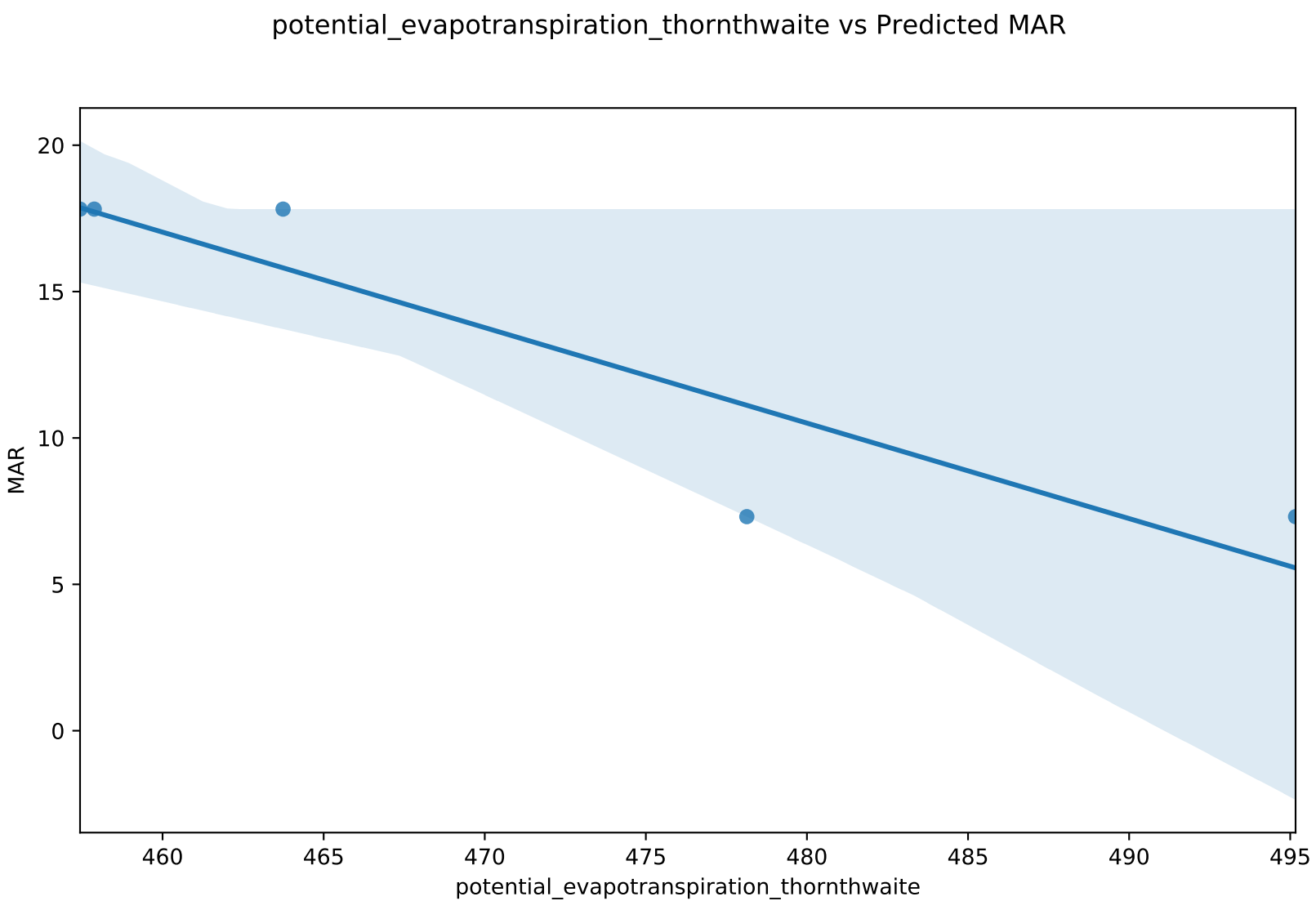


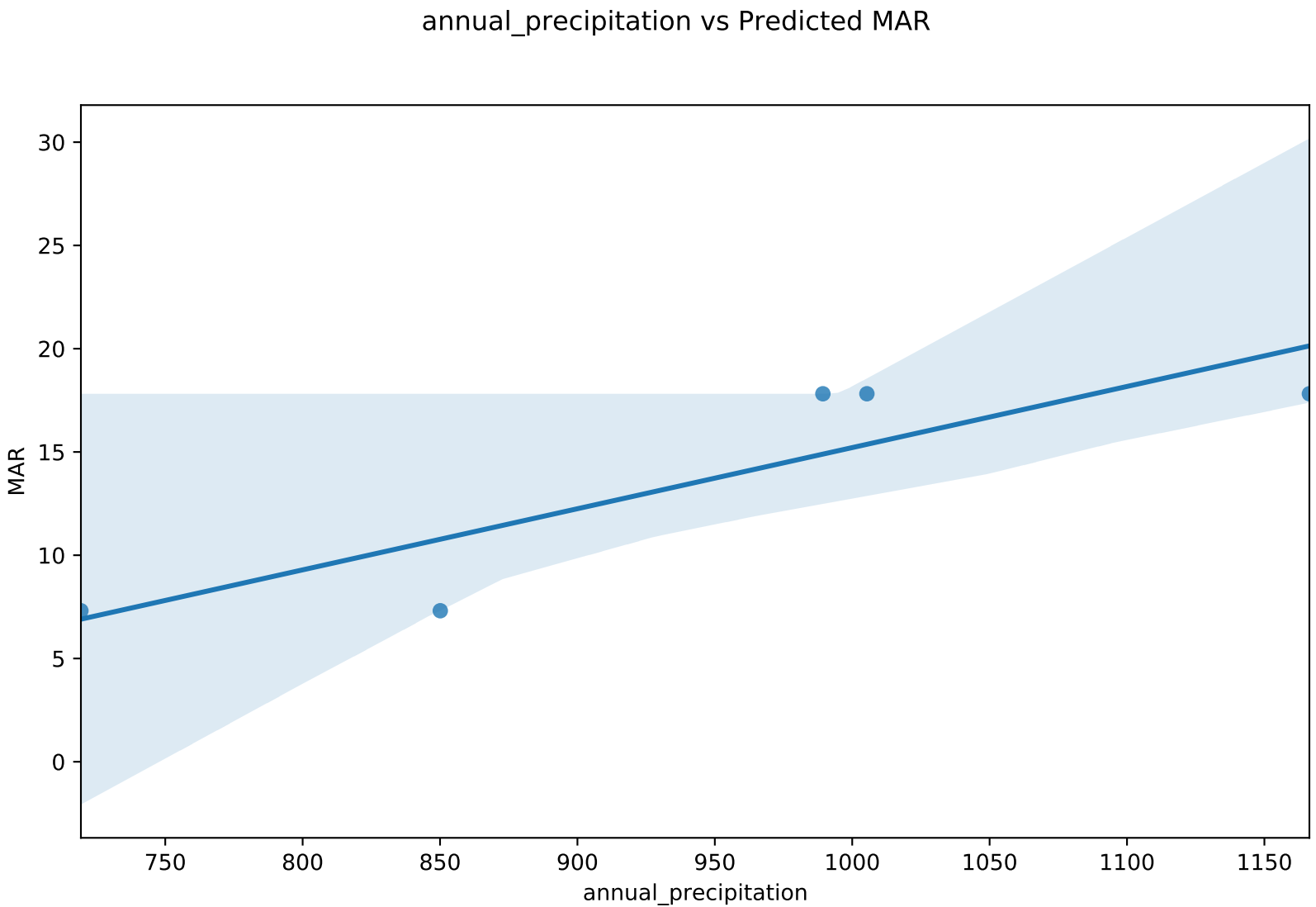

years_of_data vs Predicted MAR
MAR
40
30
20
10
0
−10
−20
10
15
20
25
30
35
40
years_of_data

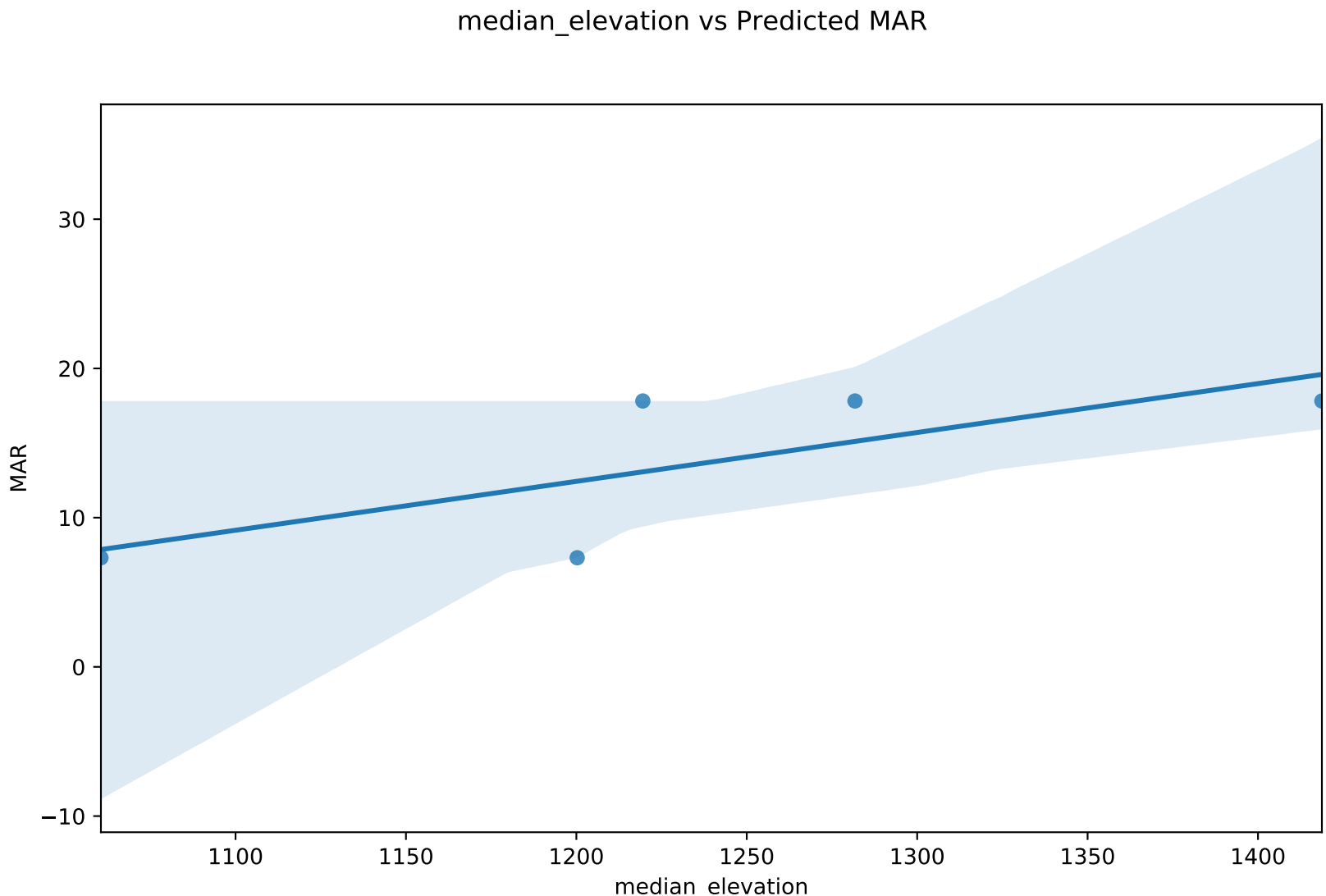

drainage_area vs Predicted MAR
MAR
drainage_area
40
35
30
25
20
15
10
5
500
1000
1500
2000
2500

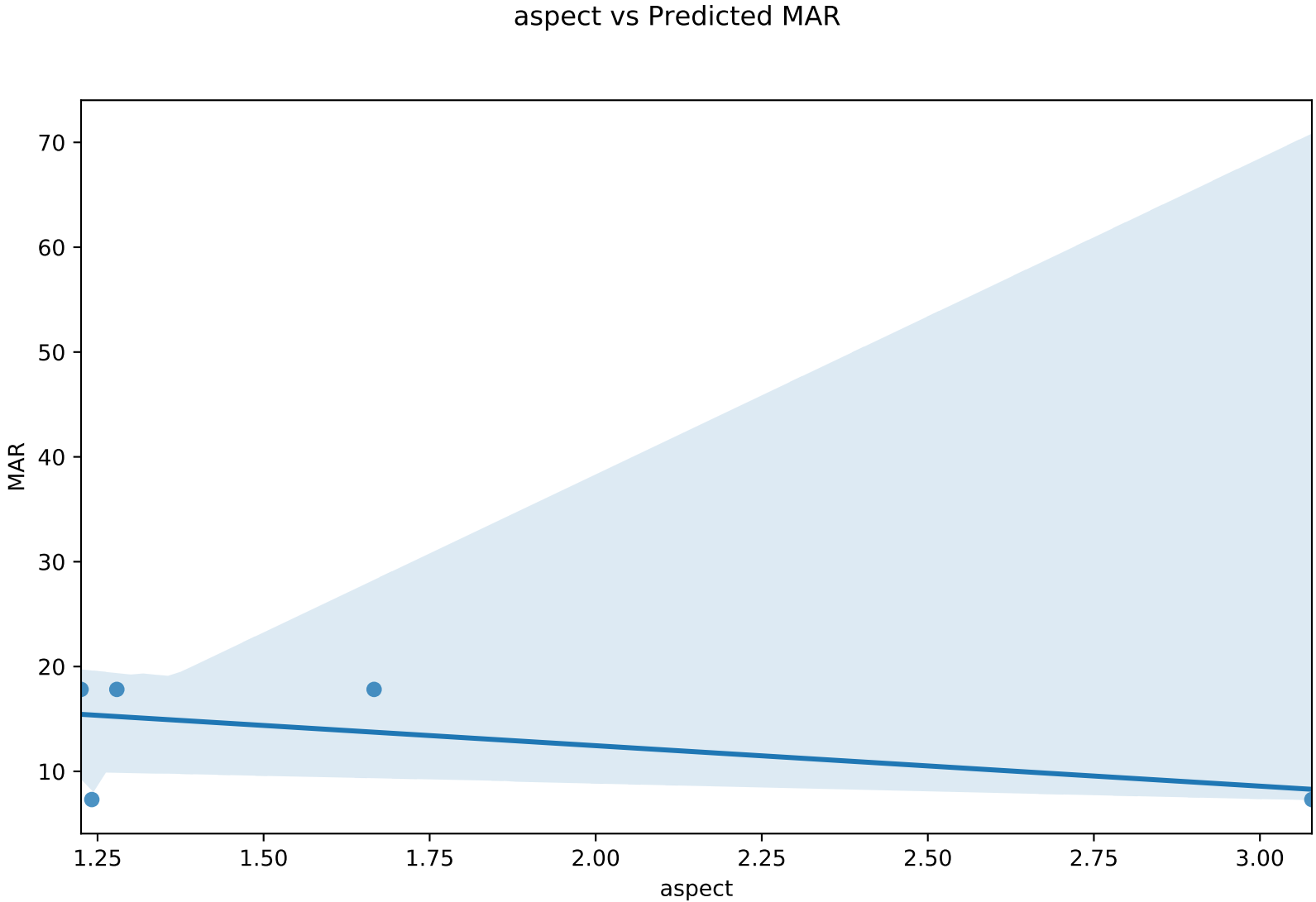

average_slope vs Predicted MAR
MAR
22.5
20.0
17.5
15.0
12.5
10.0
7.5
5.0
5
10
15
20
25
average_slope

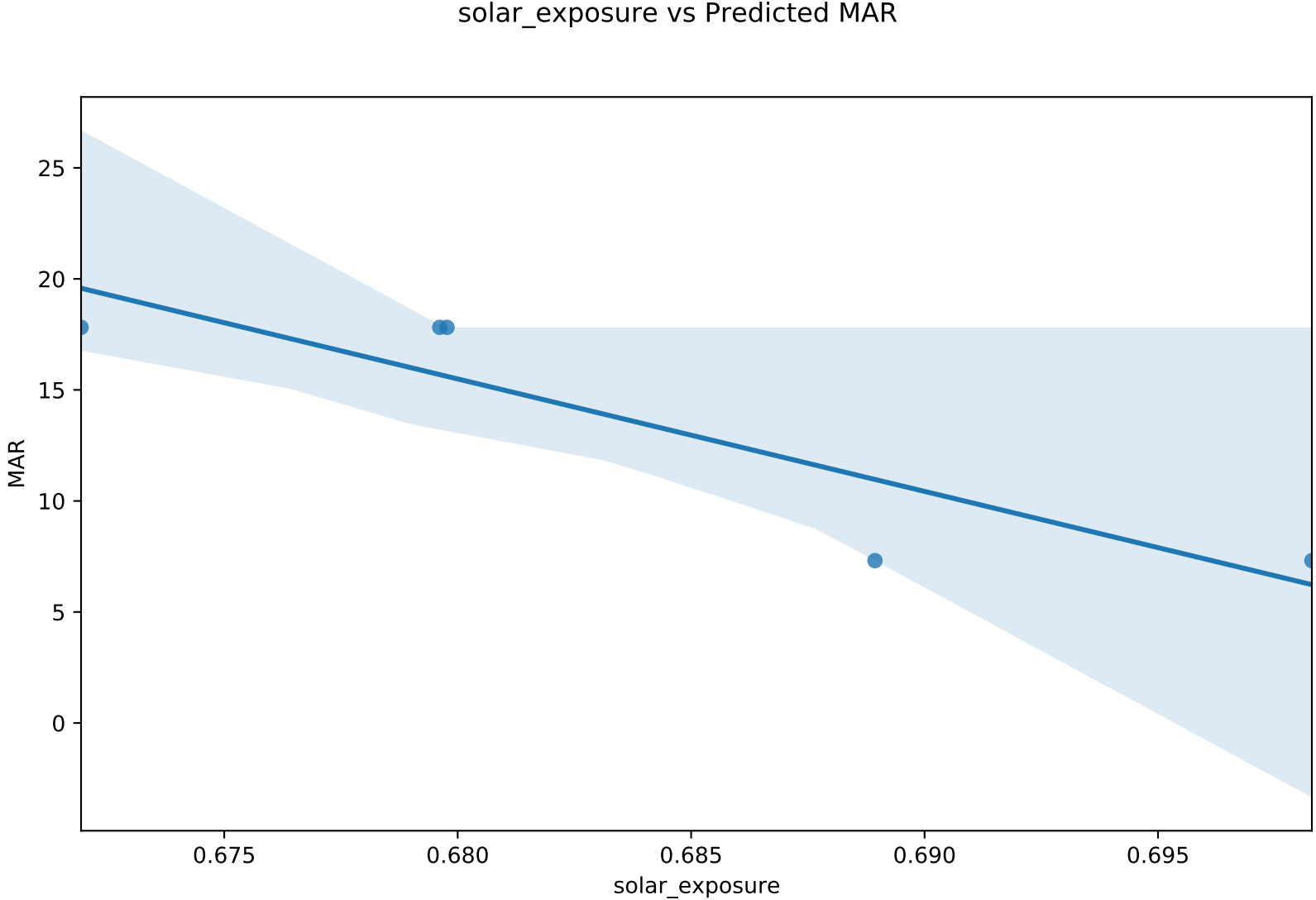

glacial_coverage vs Predicted MAR
MAR
250
200
150
100
50
0
0.000
0.002
0.004
0.006
0.008
0.010
0.012
glacial_coverage


potential_evapotranspiration_thornthwaite vs Predicted MAR
MAR
20
15
10
5
0
460
465
470
475
480
485
490
495
potential_evapotranspiration_thornthwaite


annual_precipitation vs Predicted MAR
MAR
30
25
20
15
10
5
0
750
800
850
900
950
1000
1050
1100
1150
annual_precipitation


median_elevation vs Predicted MAR
MAR
30
20
10
0
−10
1100
1150
1200
1250
1300
1350
1400
median_elevation


aspect vs Predicted MAR
MAR
70
60
50
40
30
20
10
1.25
1.50
1.75
2.00
2.25
2.50
2.75
3.00
aspect


solar_exposure vs Predicted MAR
MAR
25
20
15
10
5
0
0.675
0.680
0.685
0.690
0.695
solar_exposure