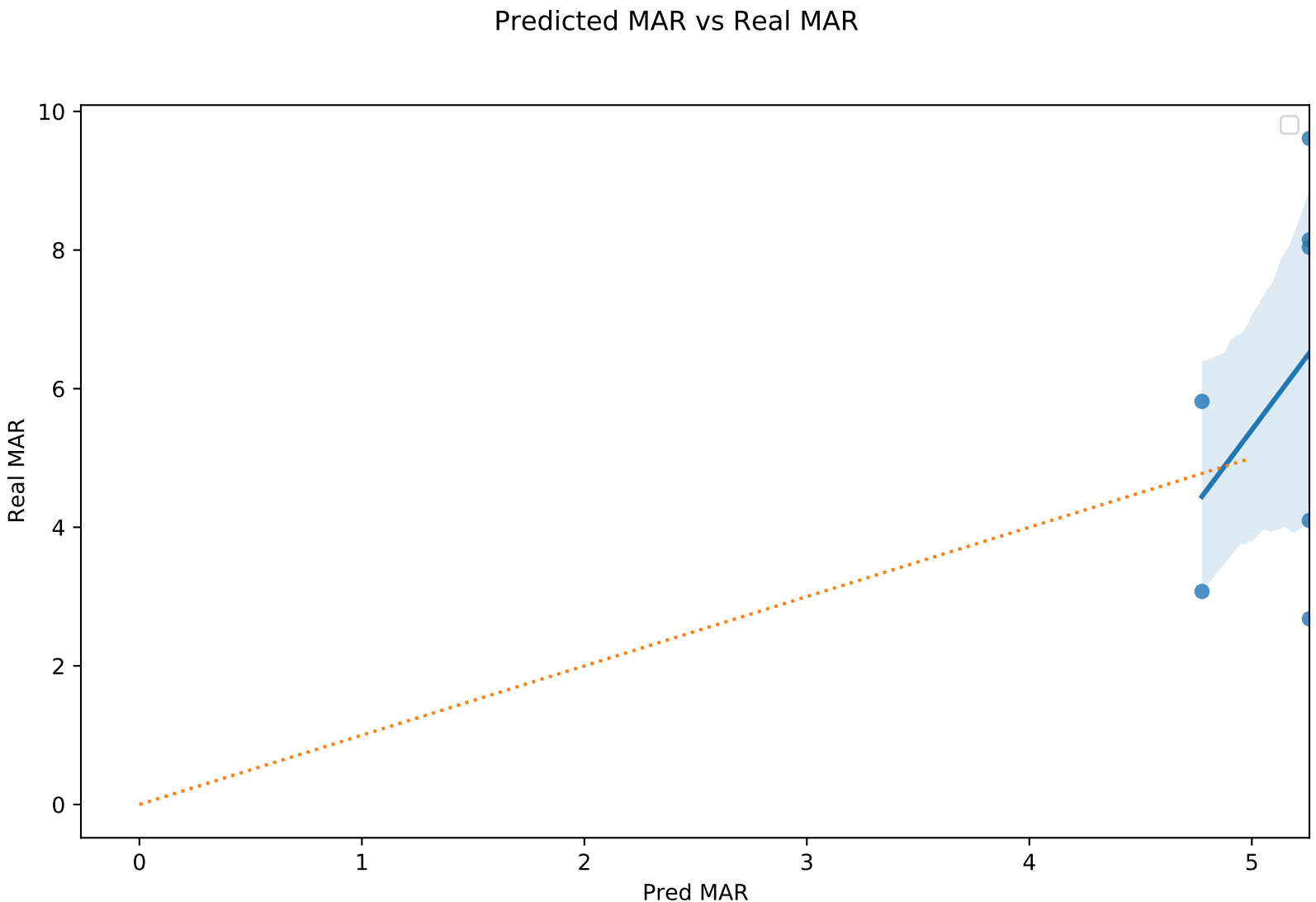
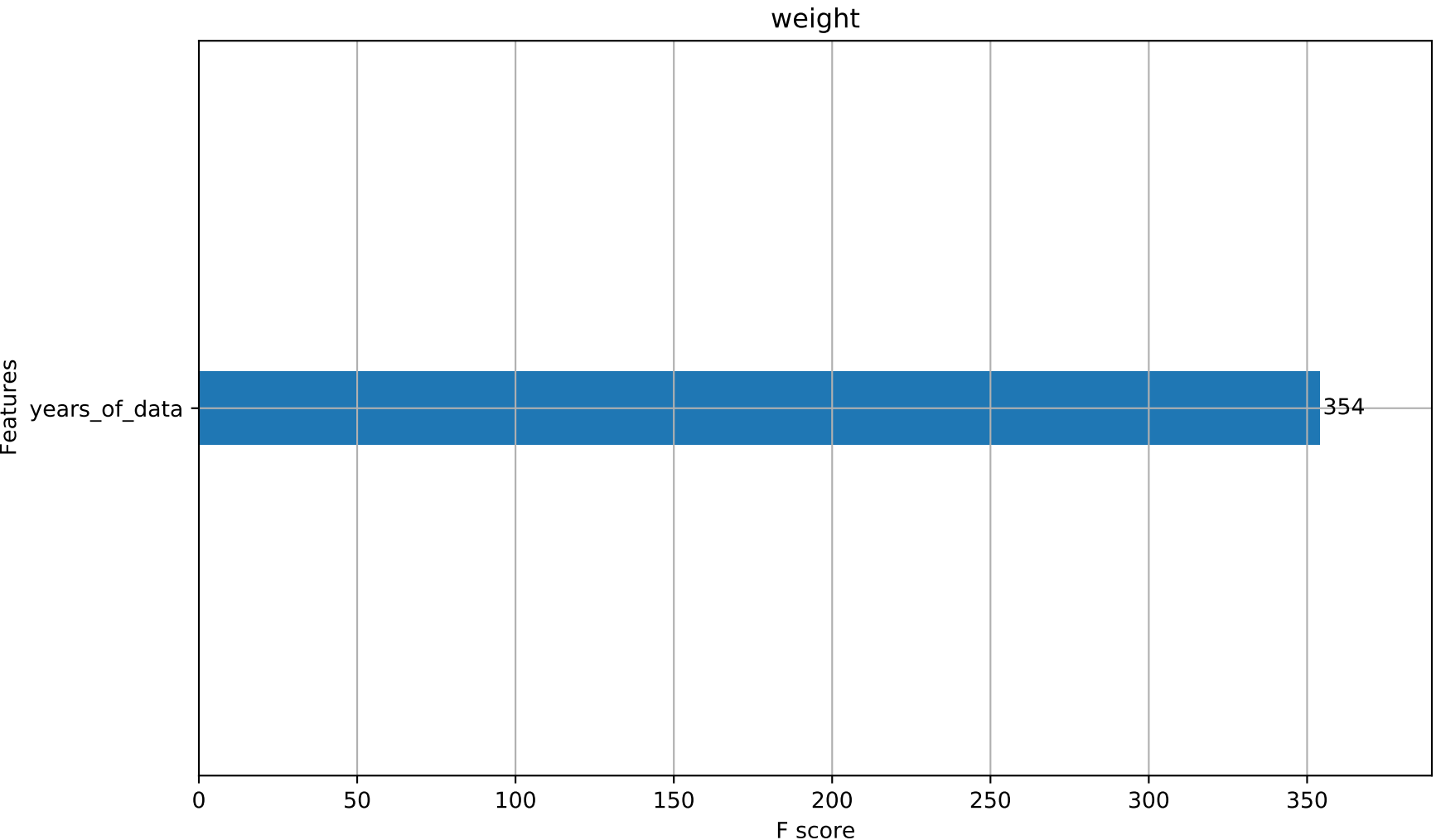
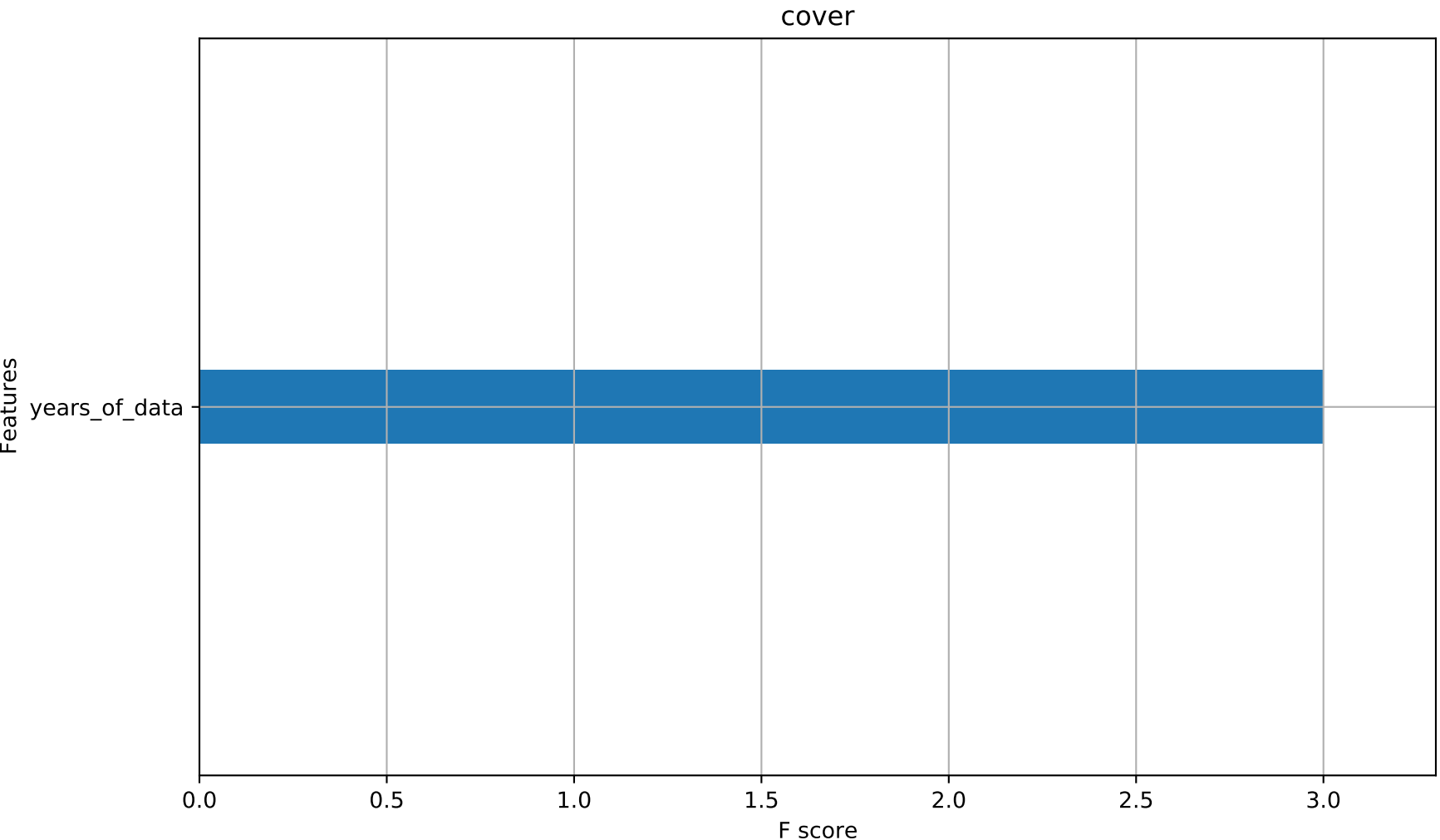
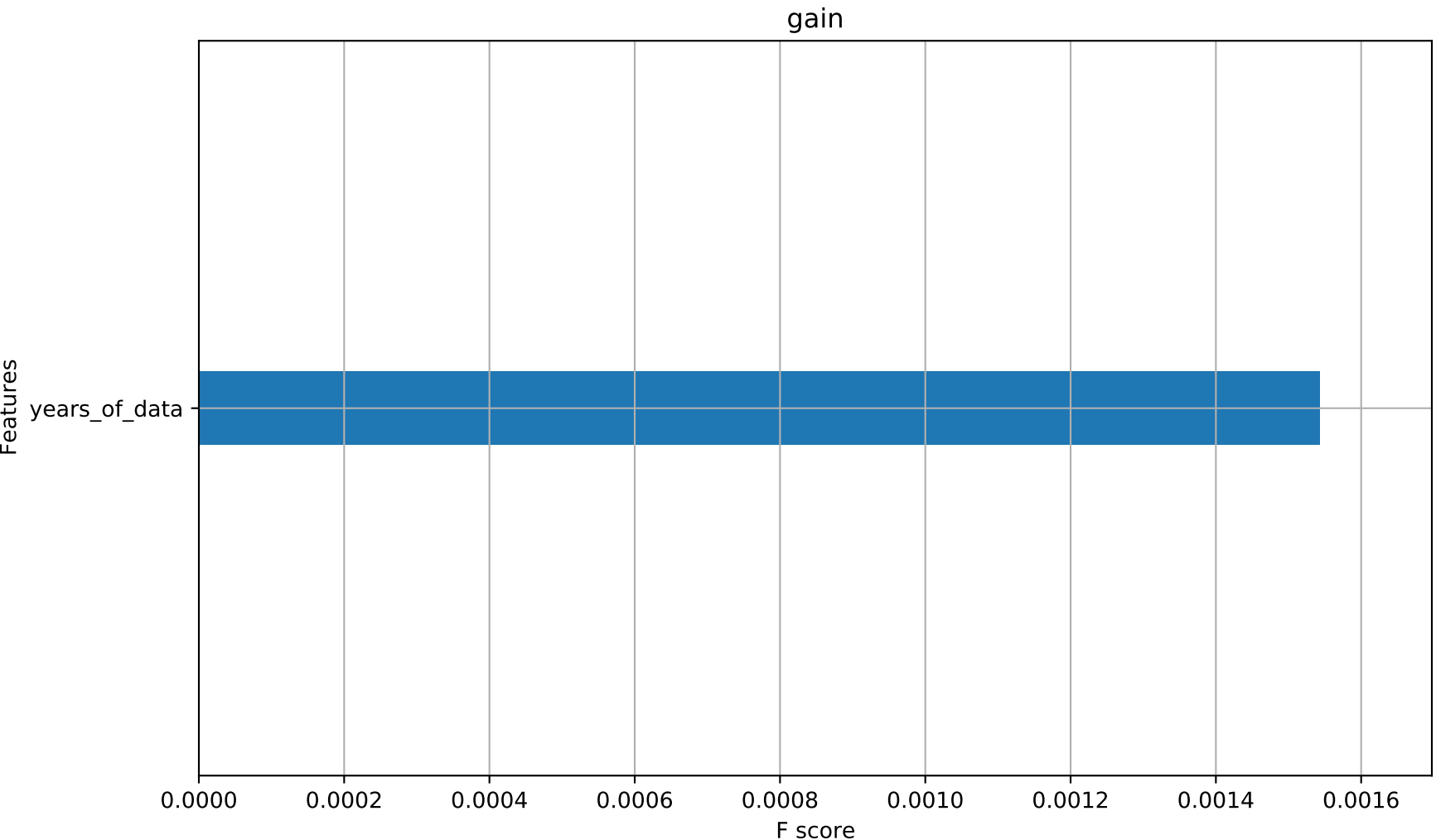
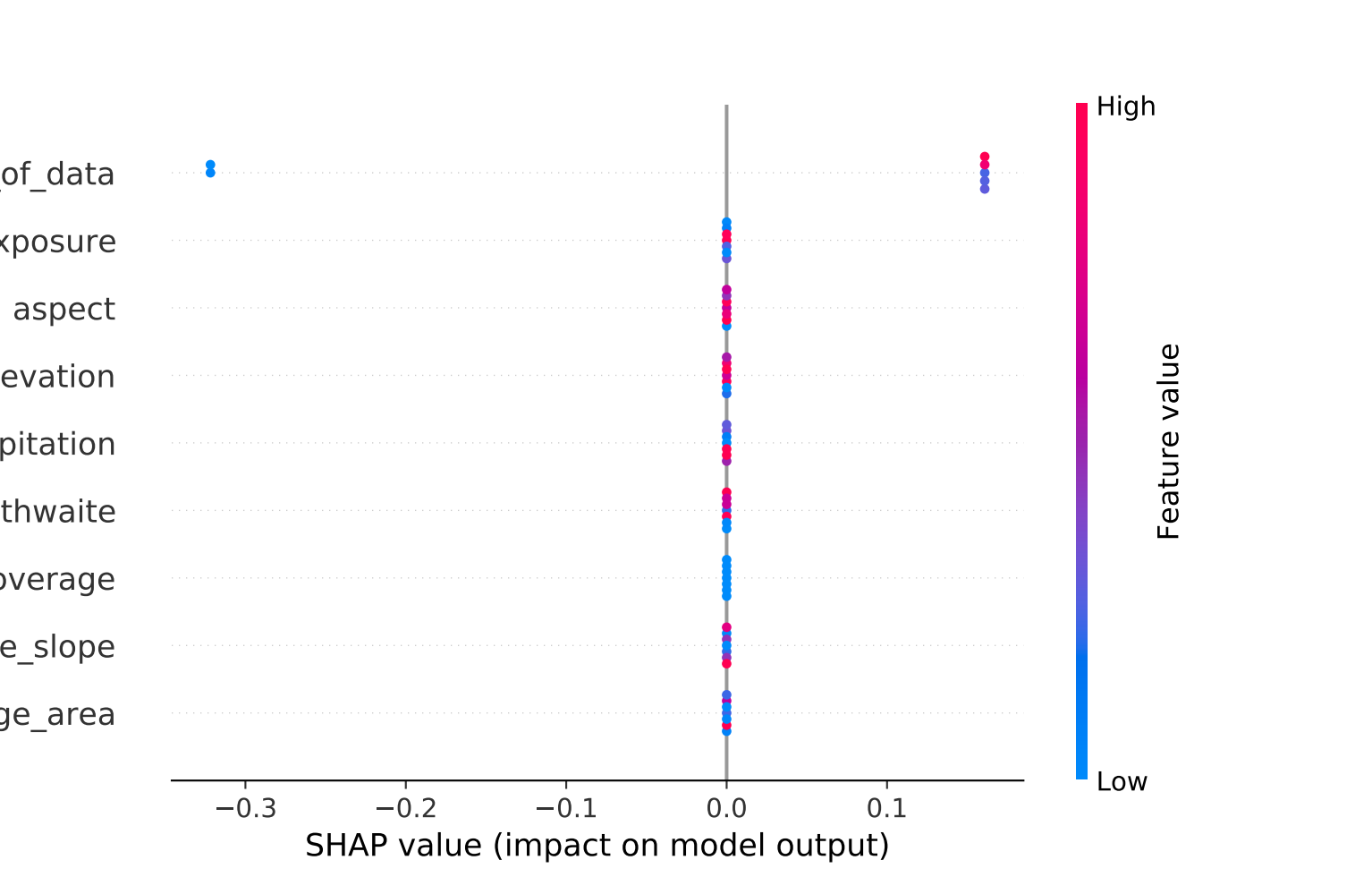

Predicted MAR vs Real MAR
Real MAR
Pred MAR
0
2
4
6
8
10
0
1
2
3
4
5

Feature Correlations
years_of_data
drainage_area
average_slope
glacial_coverage
ential_evapotranspiration_thornthwaite
annual_precipitation
median_elevation
aspect
solar_exposure
rs_of_data
inage_area
rage_slope
l coverage
ornthwaite
ecipitation
n elevation
aspect
r exposure
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00

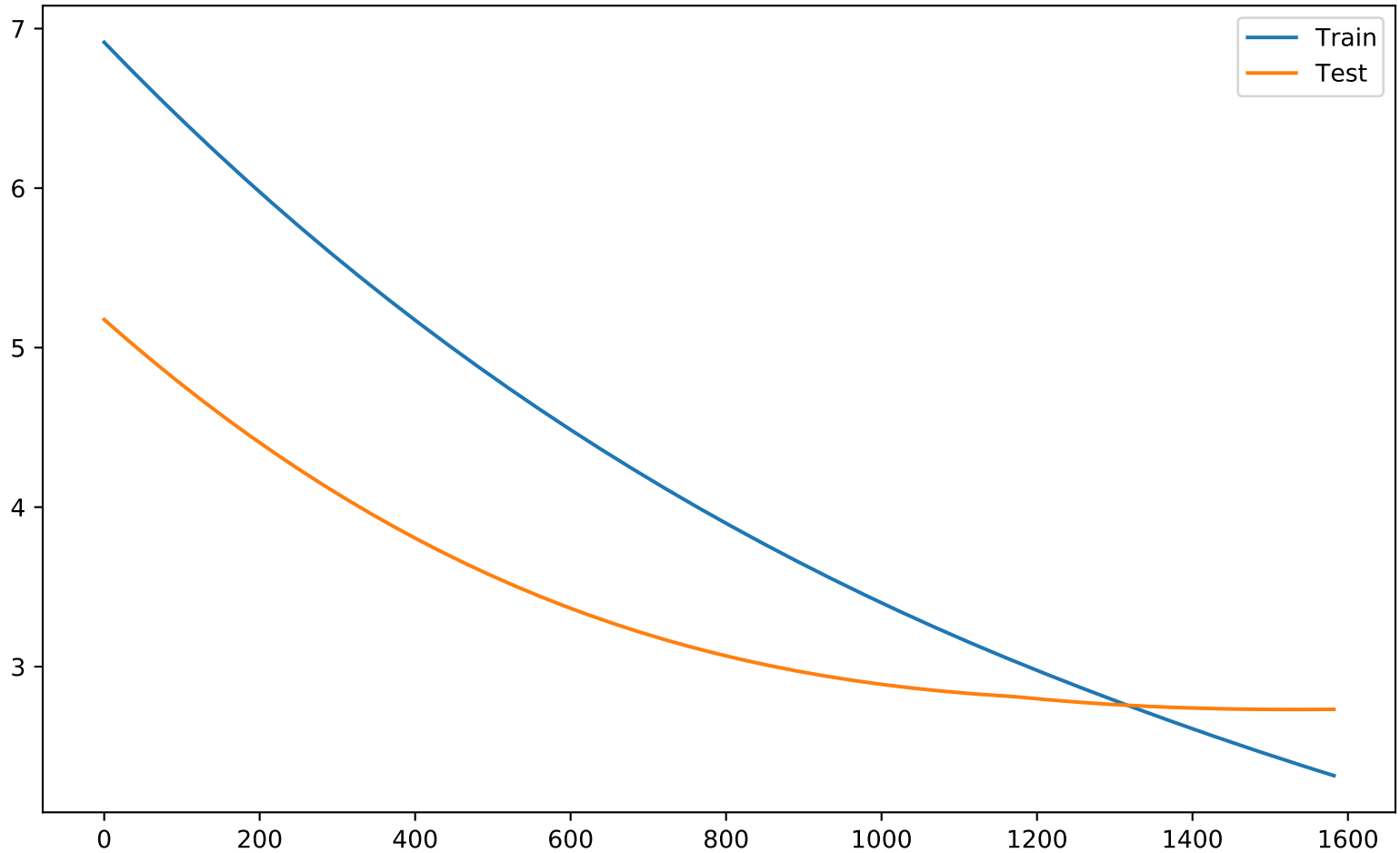

weight
Features
years_of_data
354
0
50
100
150
200
250
300
350
F score

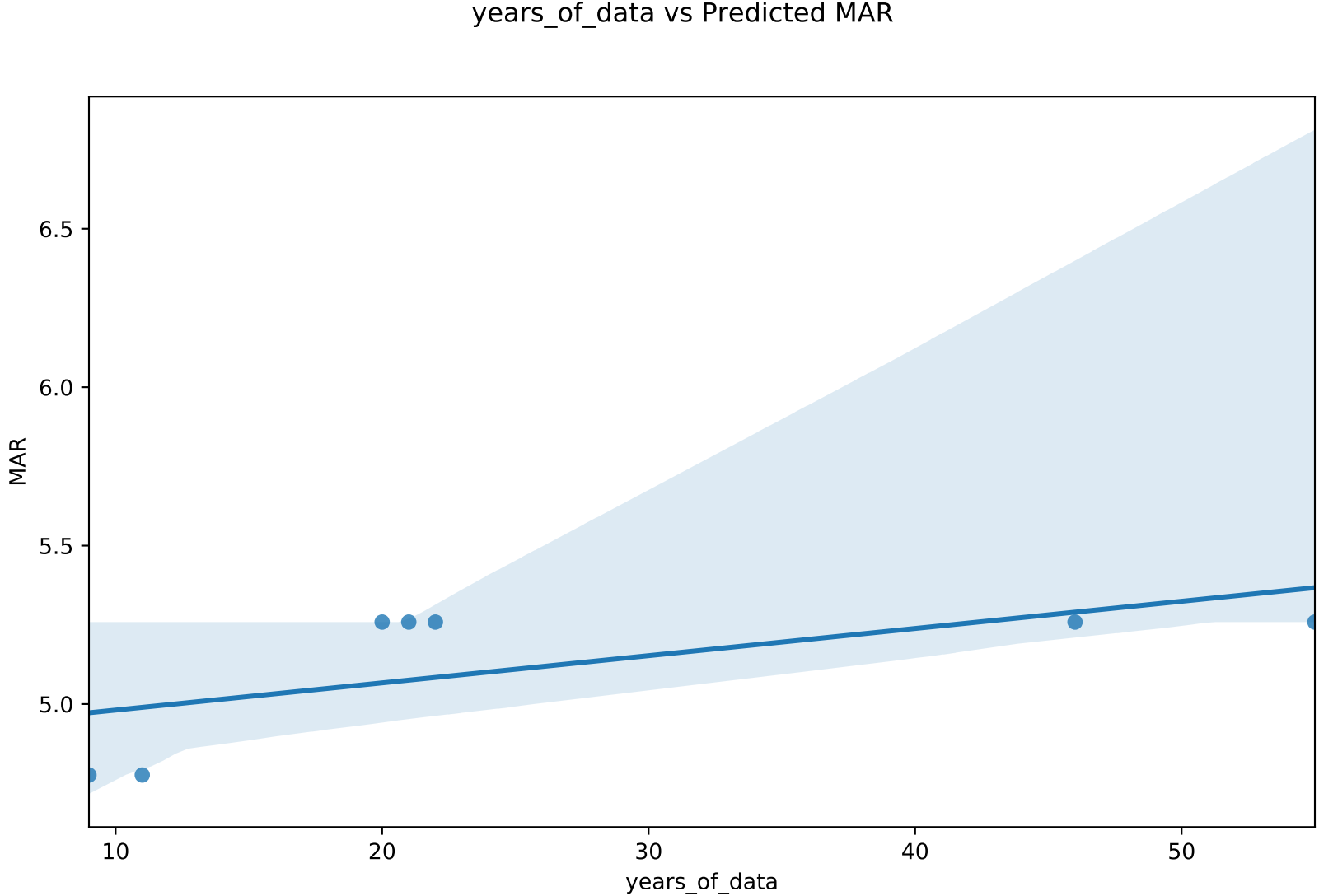

cover
Features
years_of_data
0.0
0.5
1.0
1.5
2.0
2.5
3.0
F score

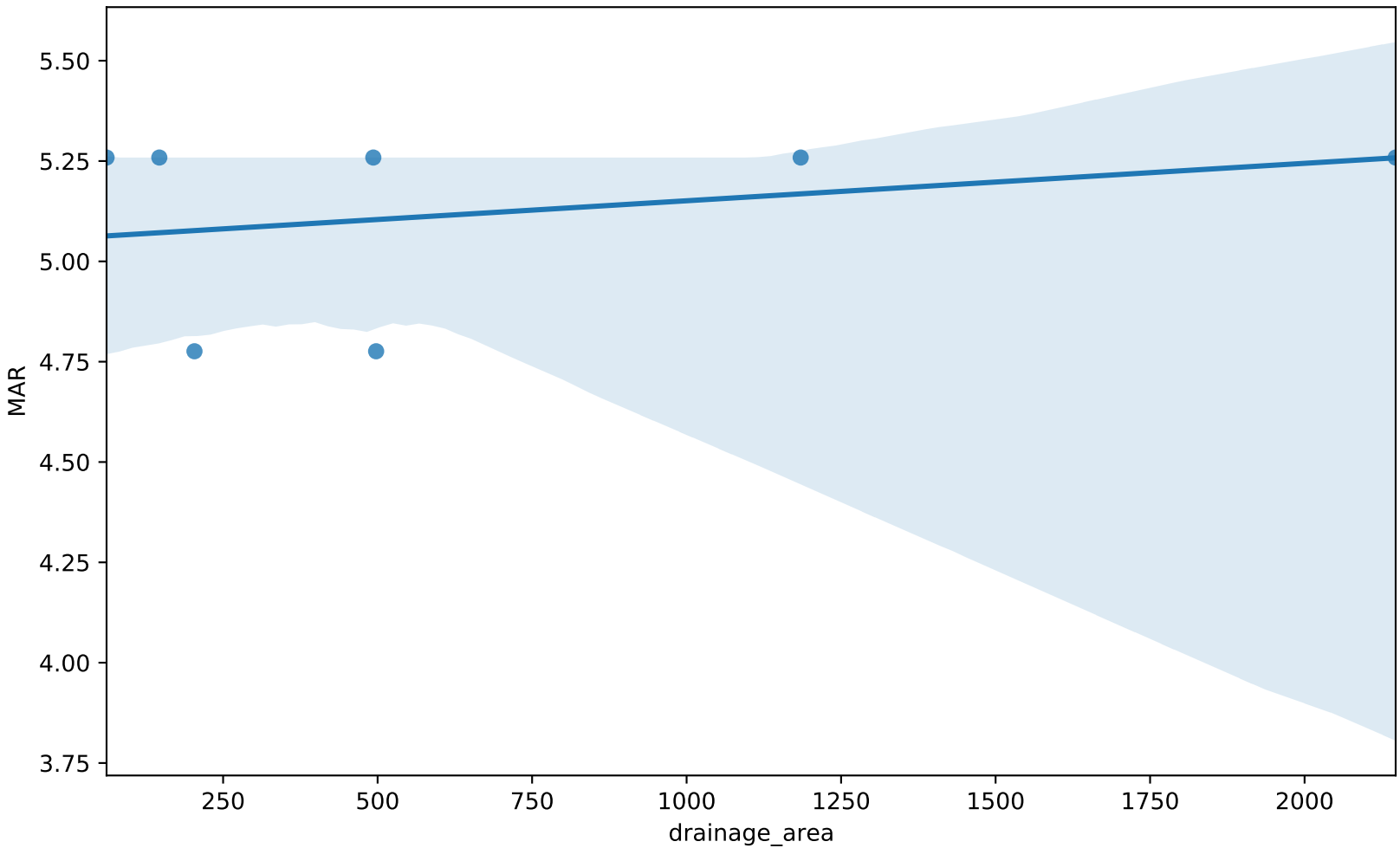

gain
Features
years_of_data
0.0000
0.0002
0.0004
0.0006
0.0008
0.0010
0.0012
0.0014
0.0016
F score

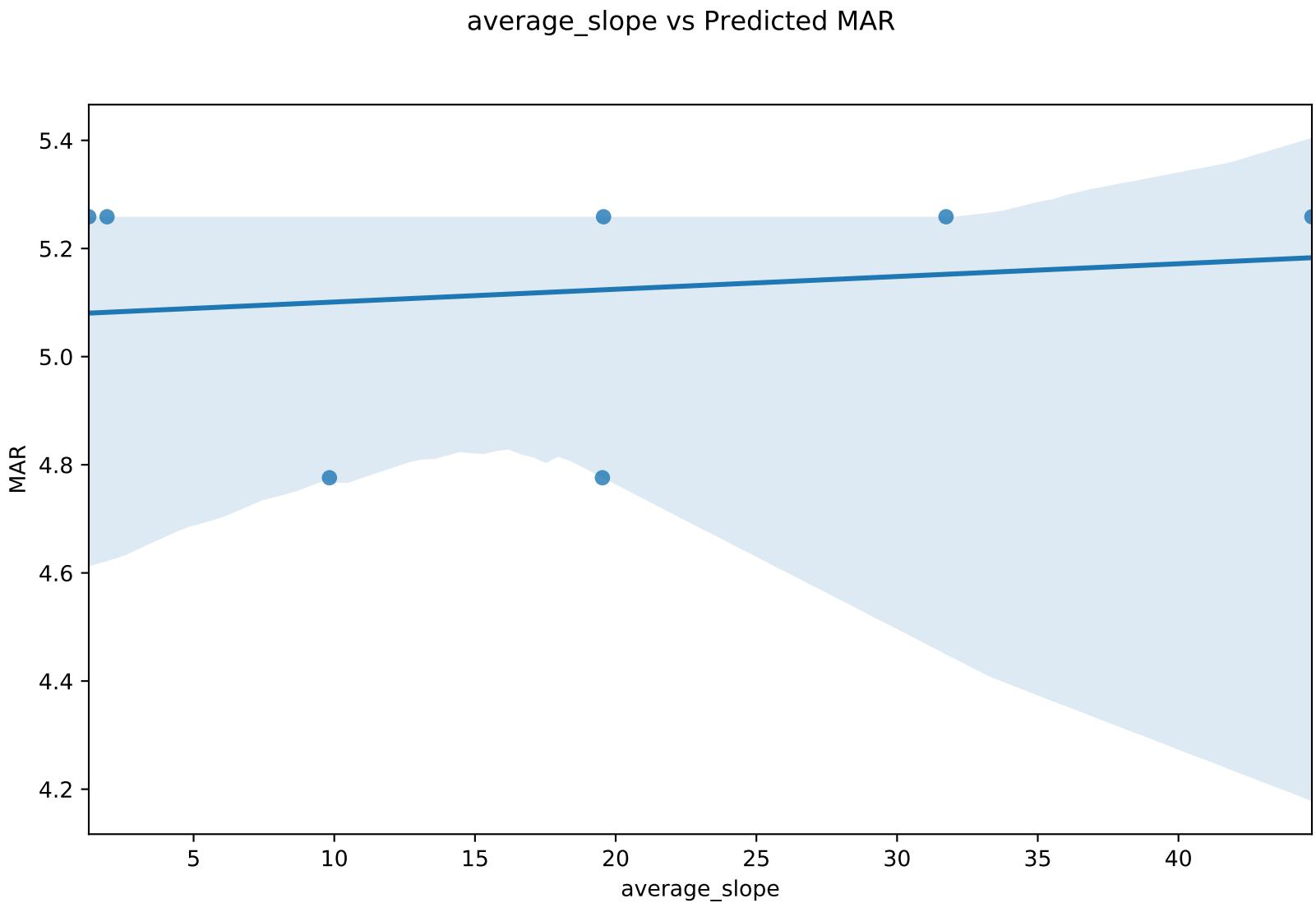

of_data
xposure
aspect
evation
pitation
thwaite
overage
e_slope
ge_area
−0.3
−0.2
−0.1
0.0
0.1
SHAP value (impact on model output)
High
Feature value
Low

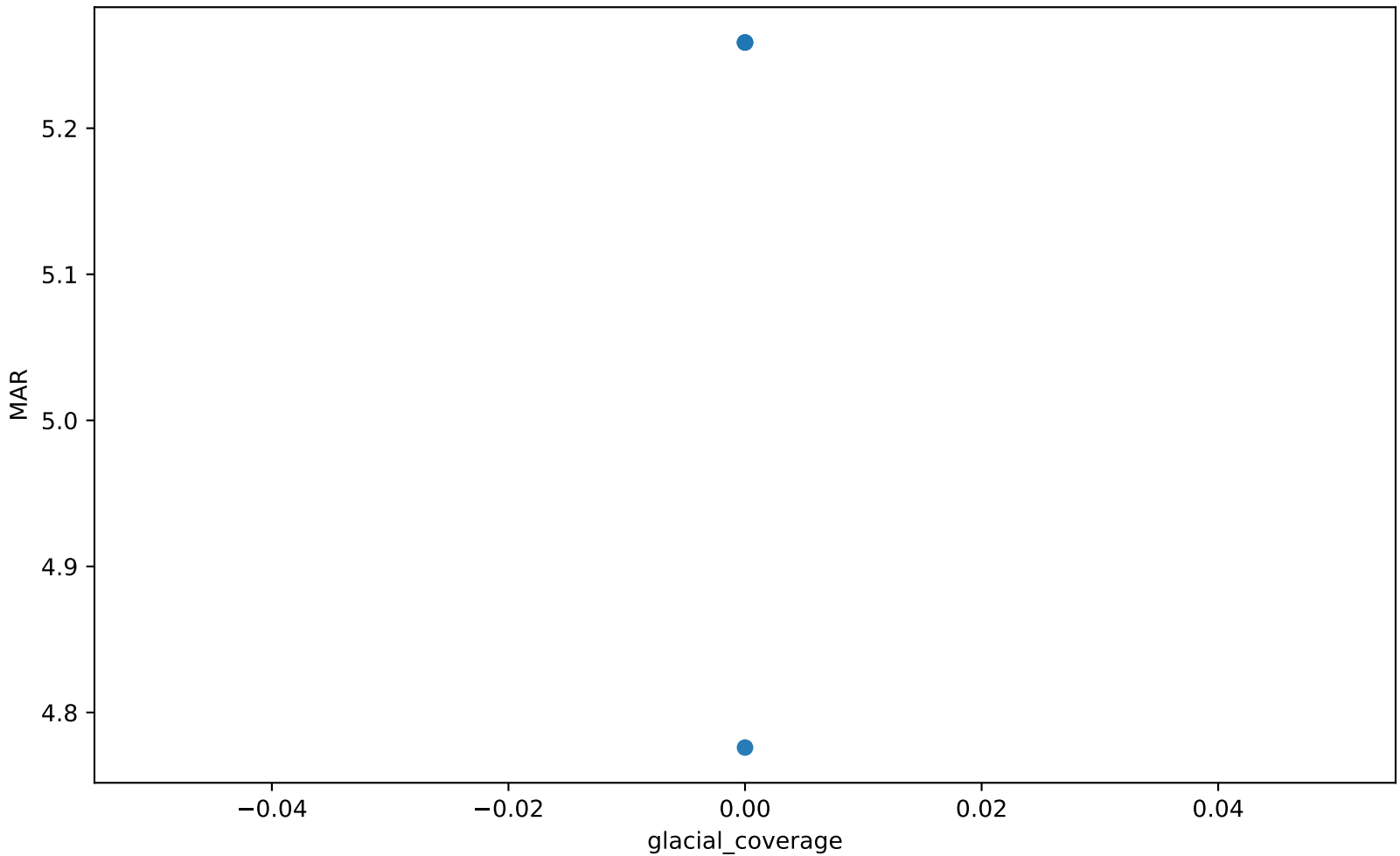
RMSE: 2.591334575669613 R2: -0.044298518833481015

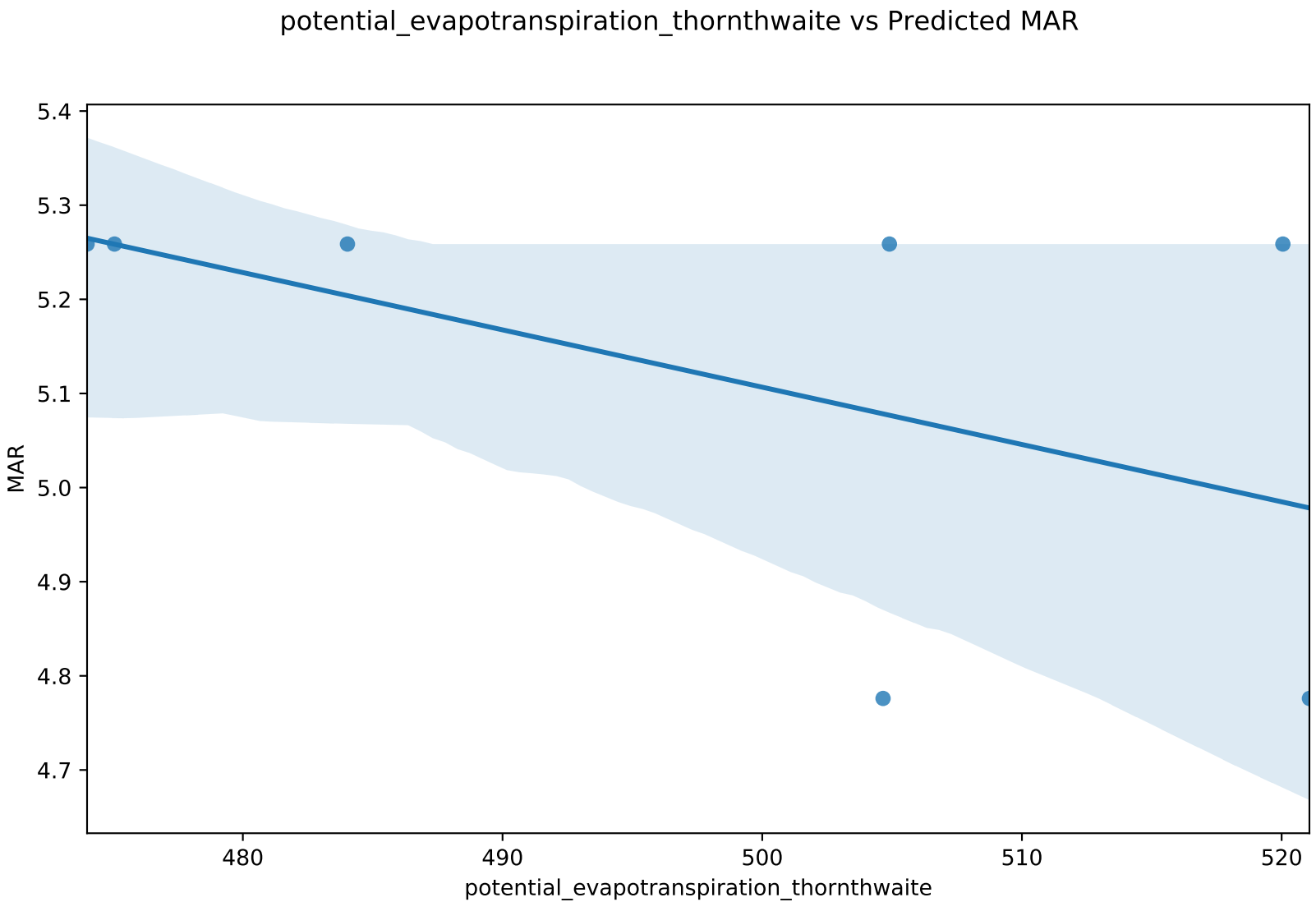


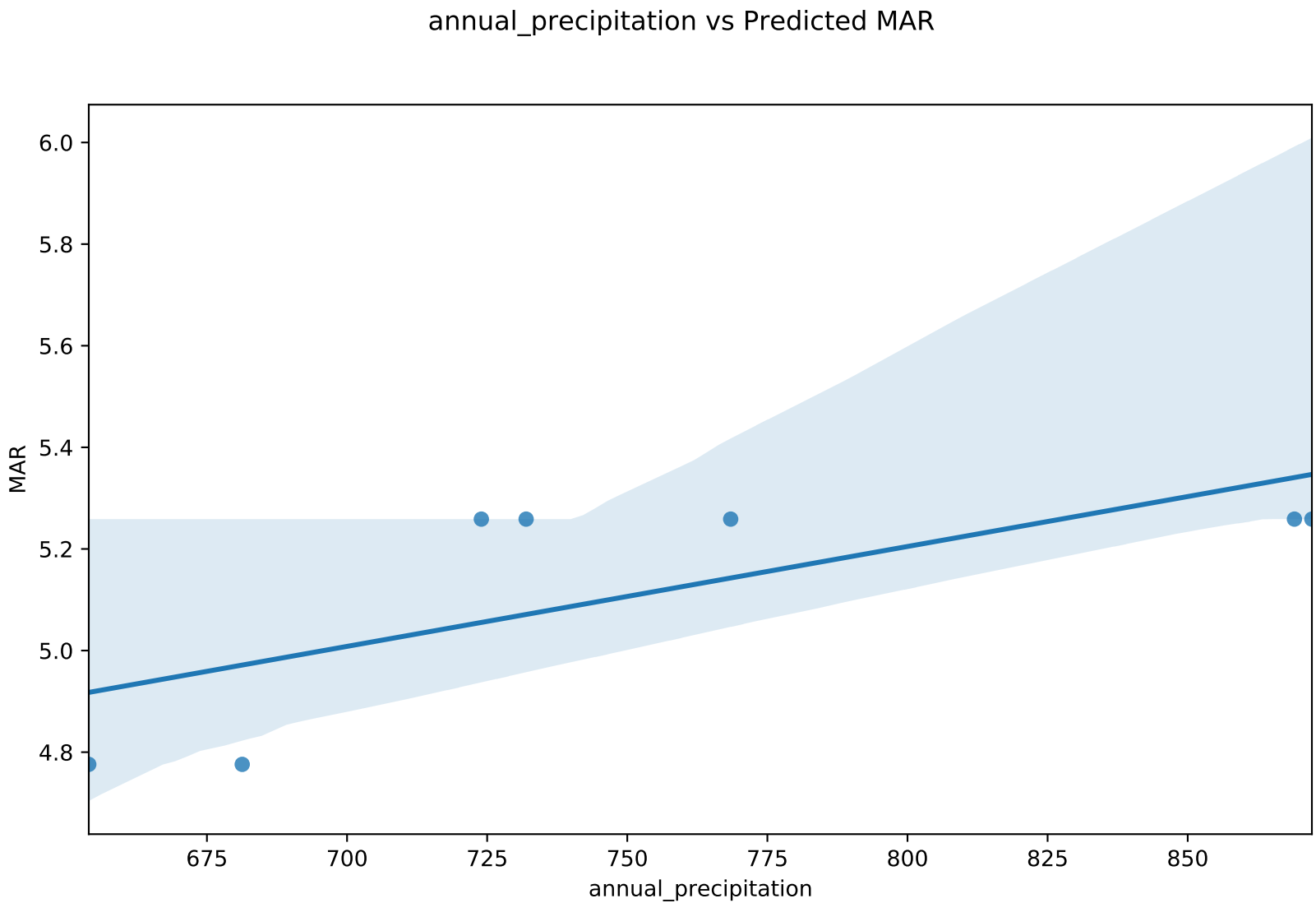

years_of_data vs Predicted MAR
MAR
6.5
6.0
5.5
5.0
10
20
30
40
50
years_of_data

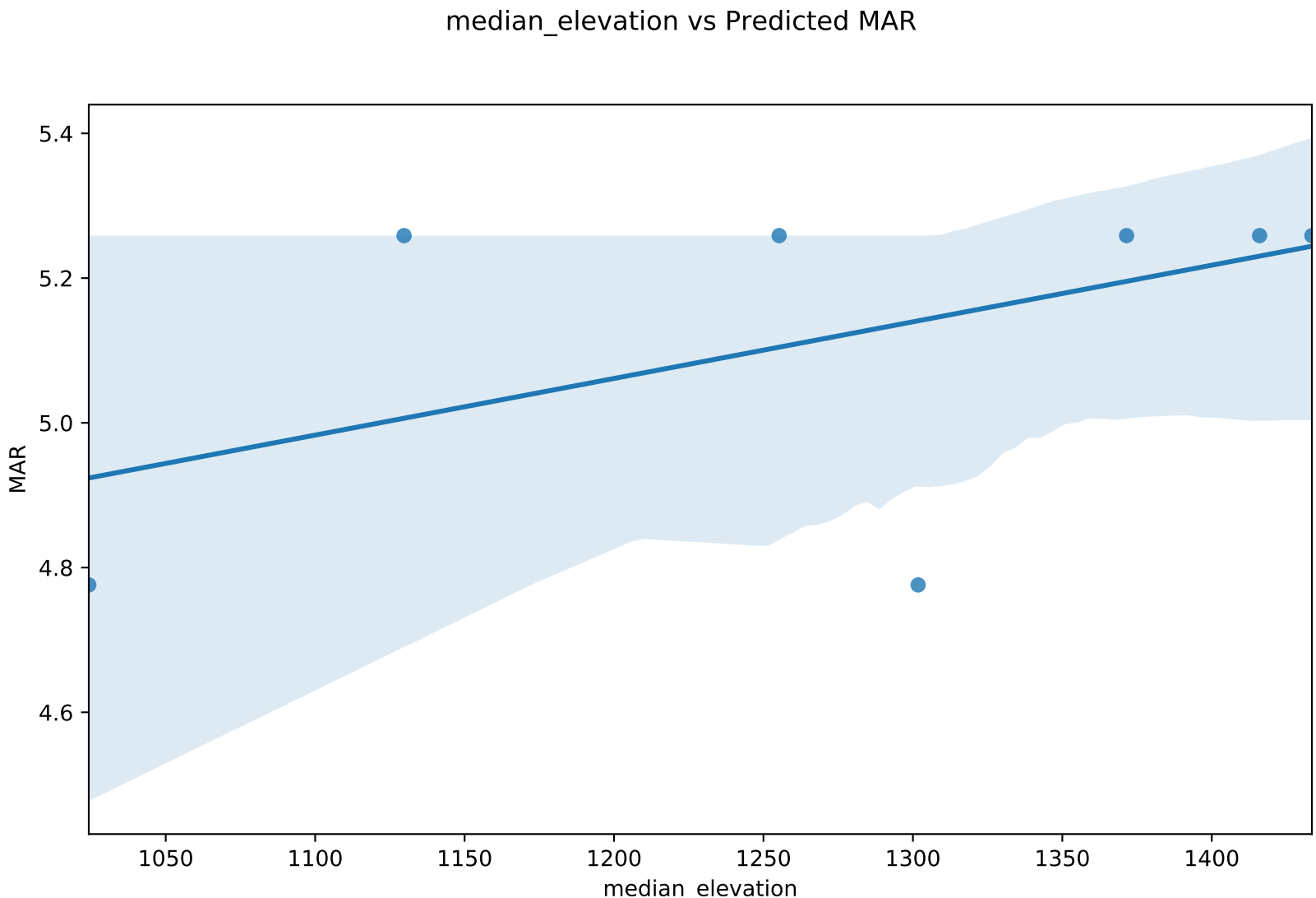

drainage_area vs Predicted MAR
MAR
5.50
5.25
5.00
4.75
4.50
4.25
4.00
3.75
250
500
750
1000
1250
1500
1750
2000
drainage_area

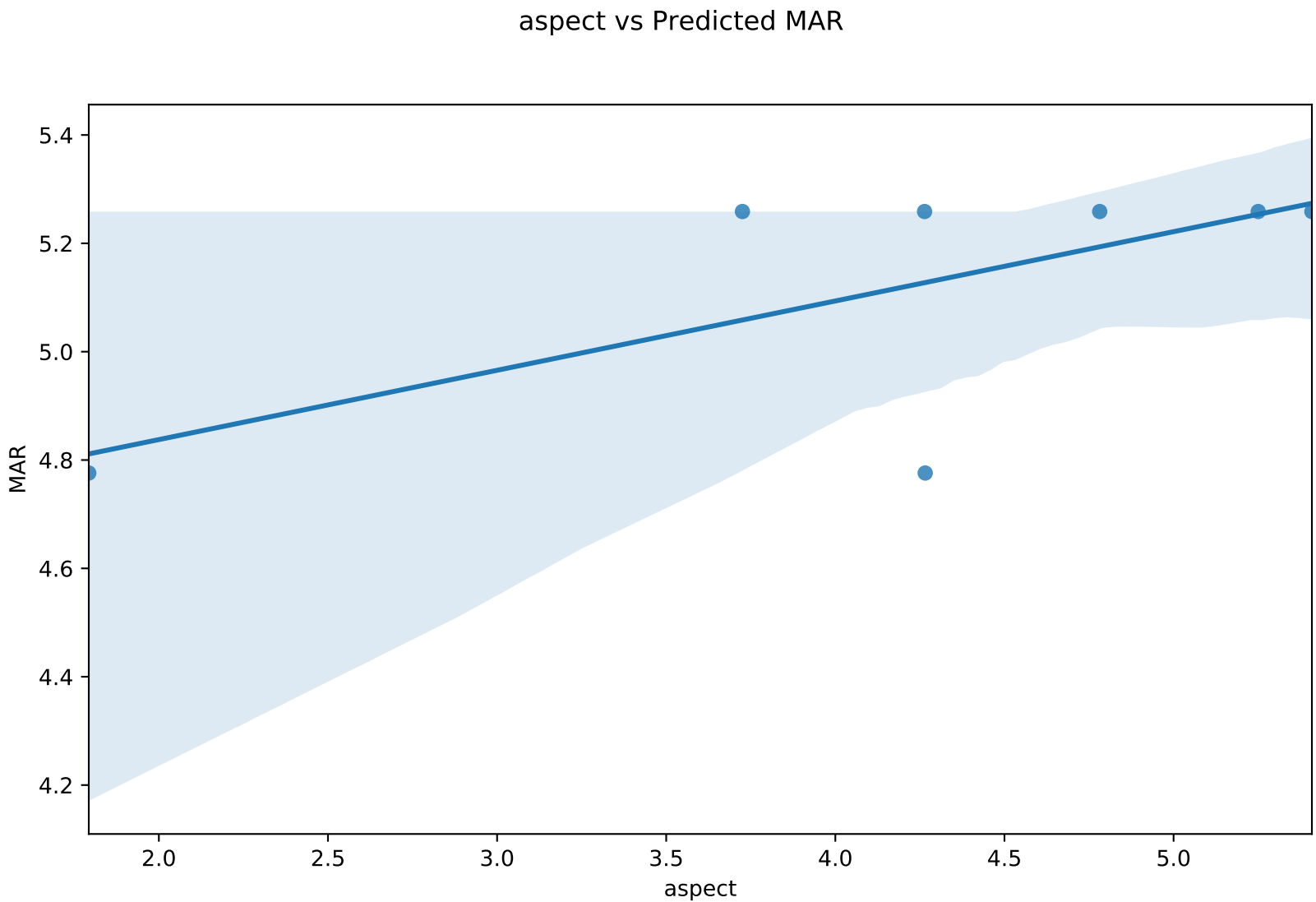

average_slope vs Predicted MAR
MAR
5.4
5.2
5.0
4.8
4.6
4.4
4.2
5
10
15
20
25
30
35
40
average_slope

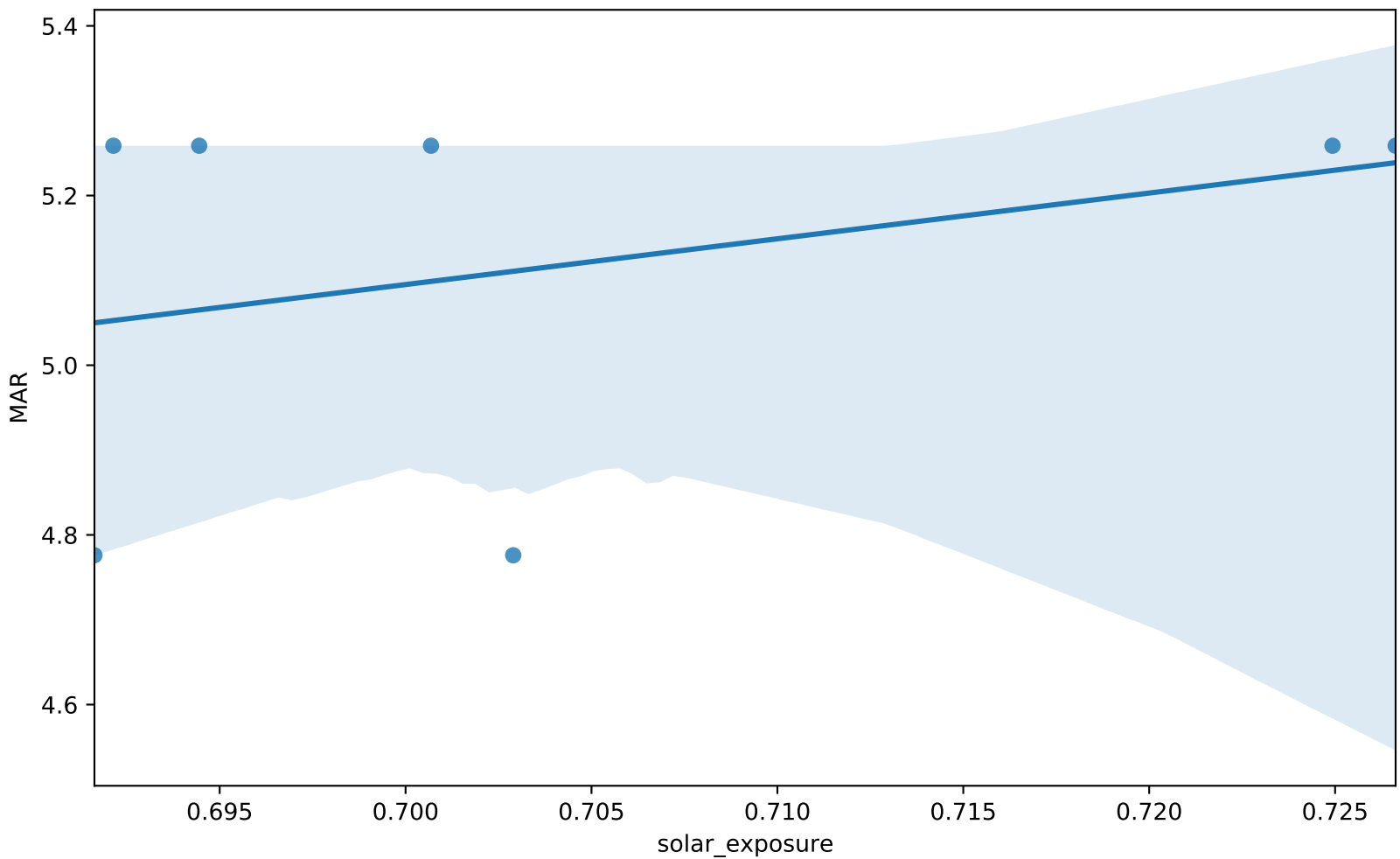

glacial_coverage vs Predicted MAR
MAR
5.2
5.1
5.0
4.9
4.8
−0.04
−0.02
0.00
0.02
0.04
glacial_coverage


potential_evapotranspiration_thornthwaite vs Predicted MAR
MAR
potential_evapotranspiration_thornthwaite
5.4
5.3
5.2
5.1
5.0
4.9
4.8
4.7
480
490
500
510
520


annual_precipitation vs Predicted MAR
MAR
6.0
5.8
5.6
5.4
5.2
5.0
4.8
675
700
725
750
775
800
825
850
annual_precipitation


median_elevation vs Predicted MAR
MAR
5.4
5.2
5.0
4.8
4.6
1050
1100
1150
1200
1250
1300
1350
1400
median_elevation


aspect vs Predicted MAR
MAR
5.4
5.2
5.0
4.8
4.6
4.4
4.2
2.0
2.5
3.0
3.5
4.0
4.5
5.0
aspect


solar_exposure vs Predicted MAR
5.4
5.2
5.0
4.8
4.6
MAR
0.695
0.700
0.705
0.710
0.715
0.720
0.725
solar_exposure