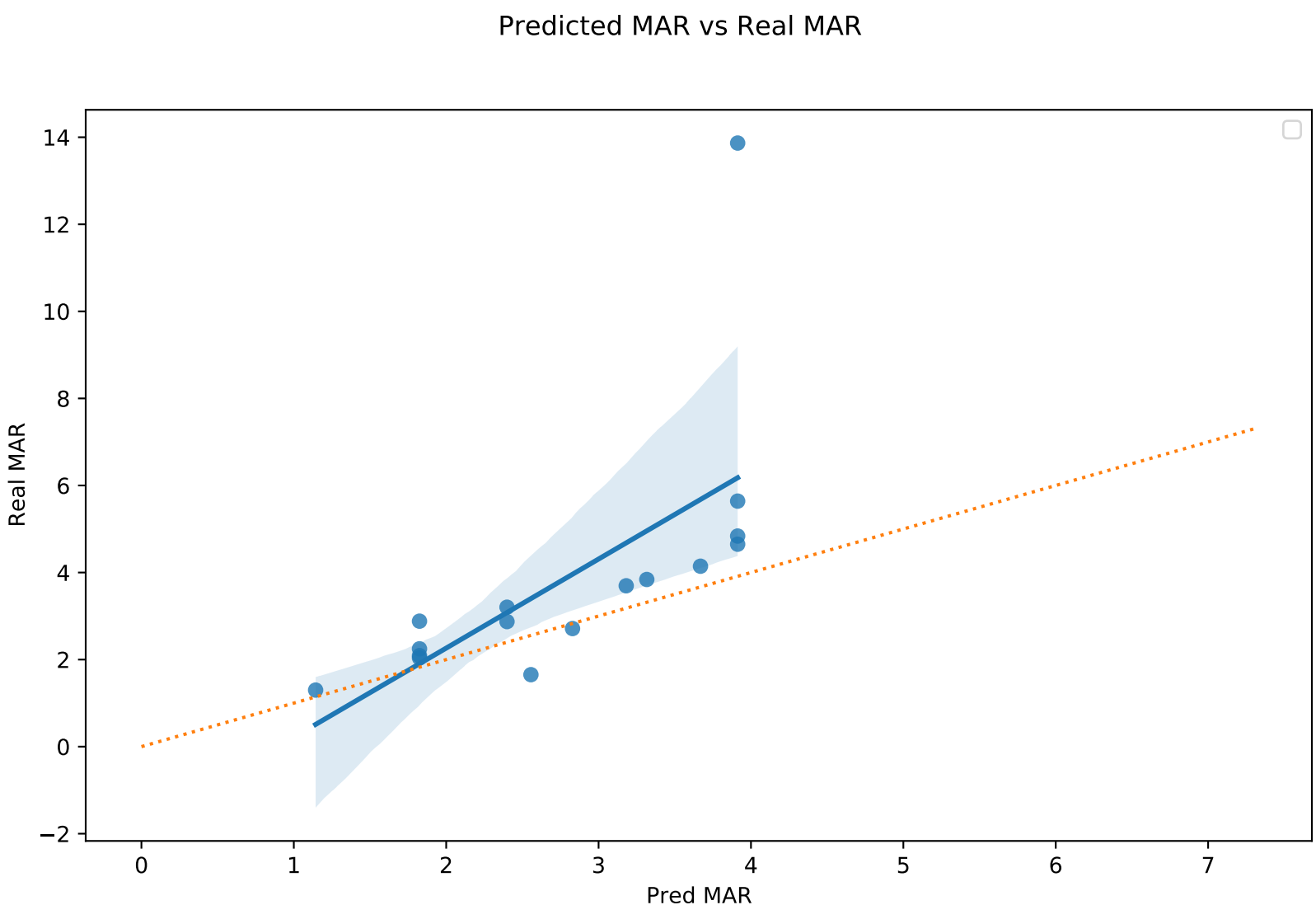
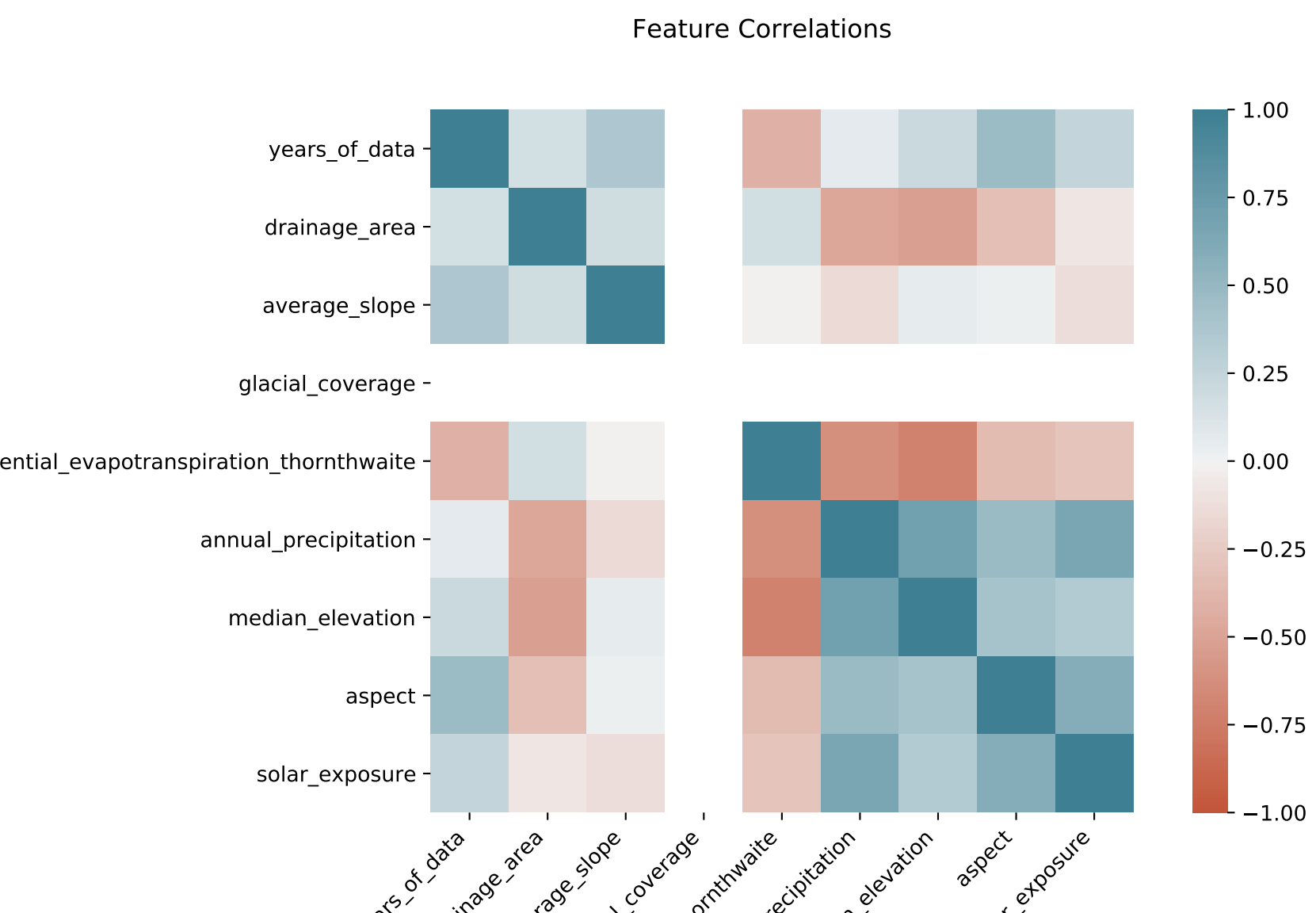
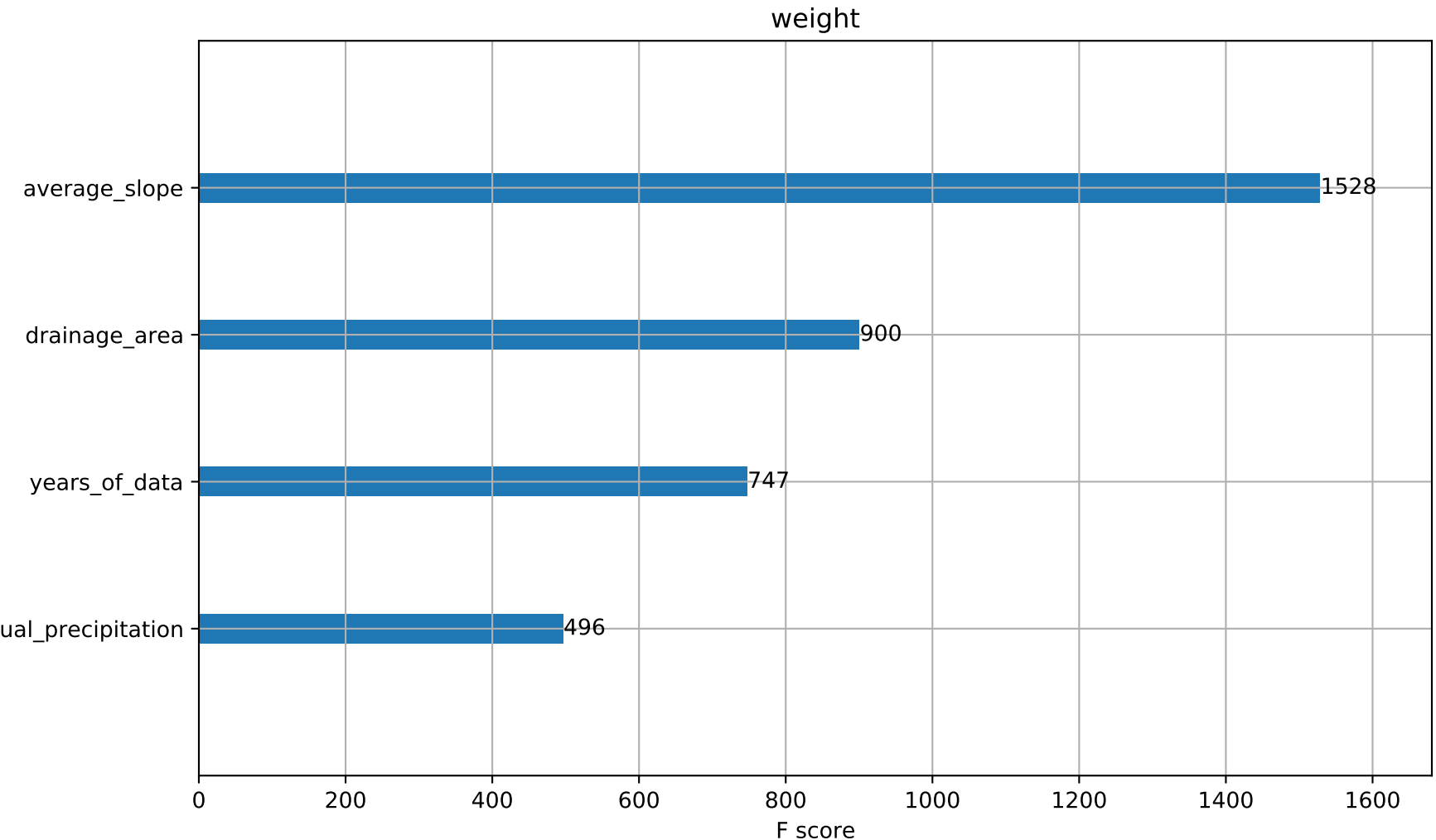
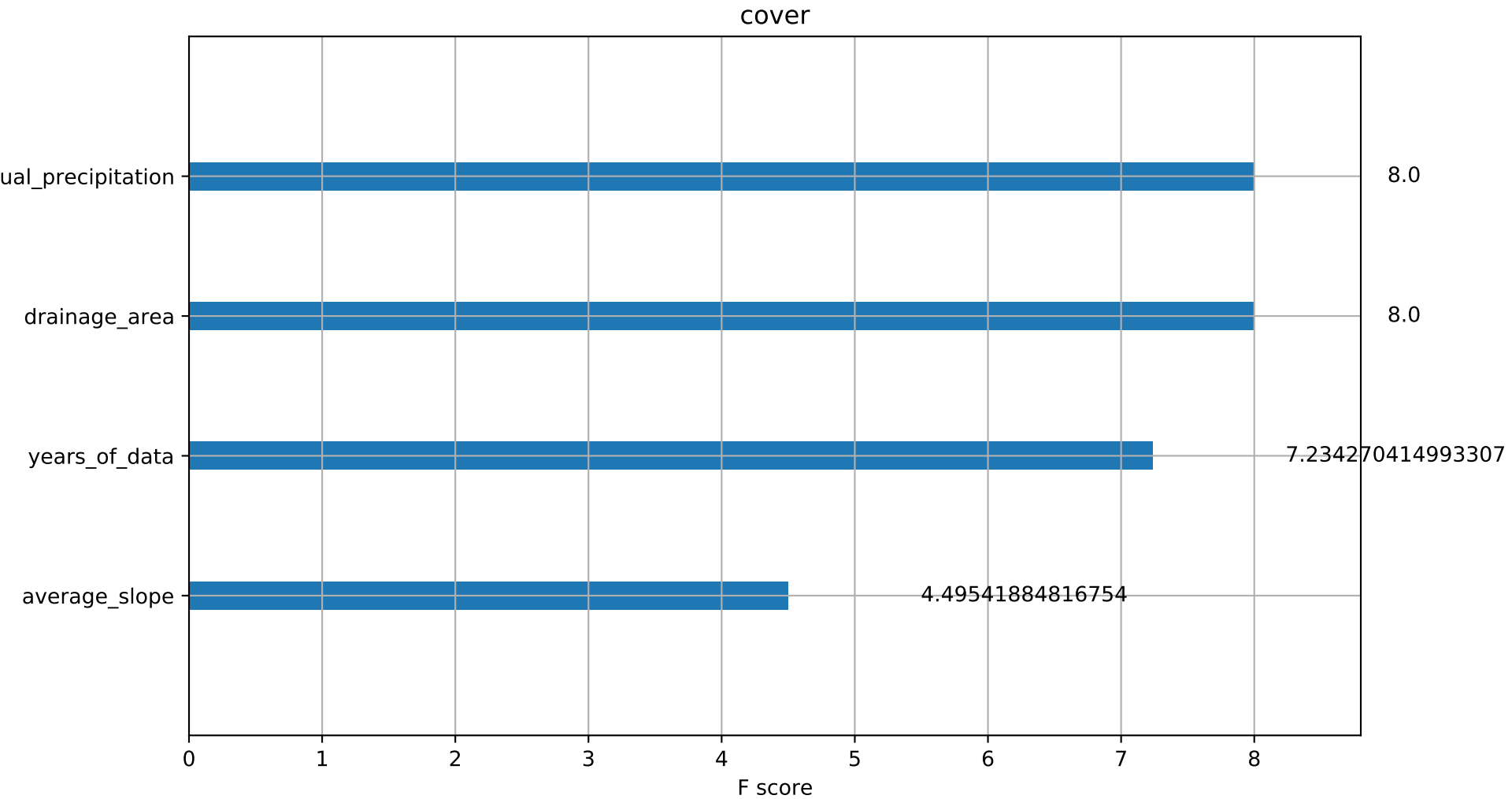
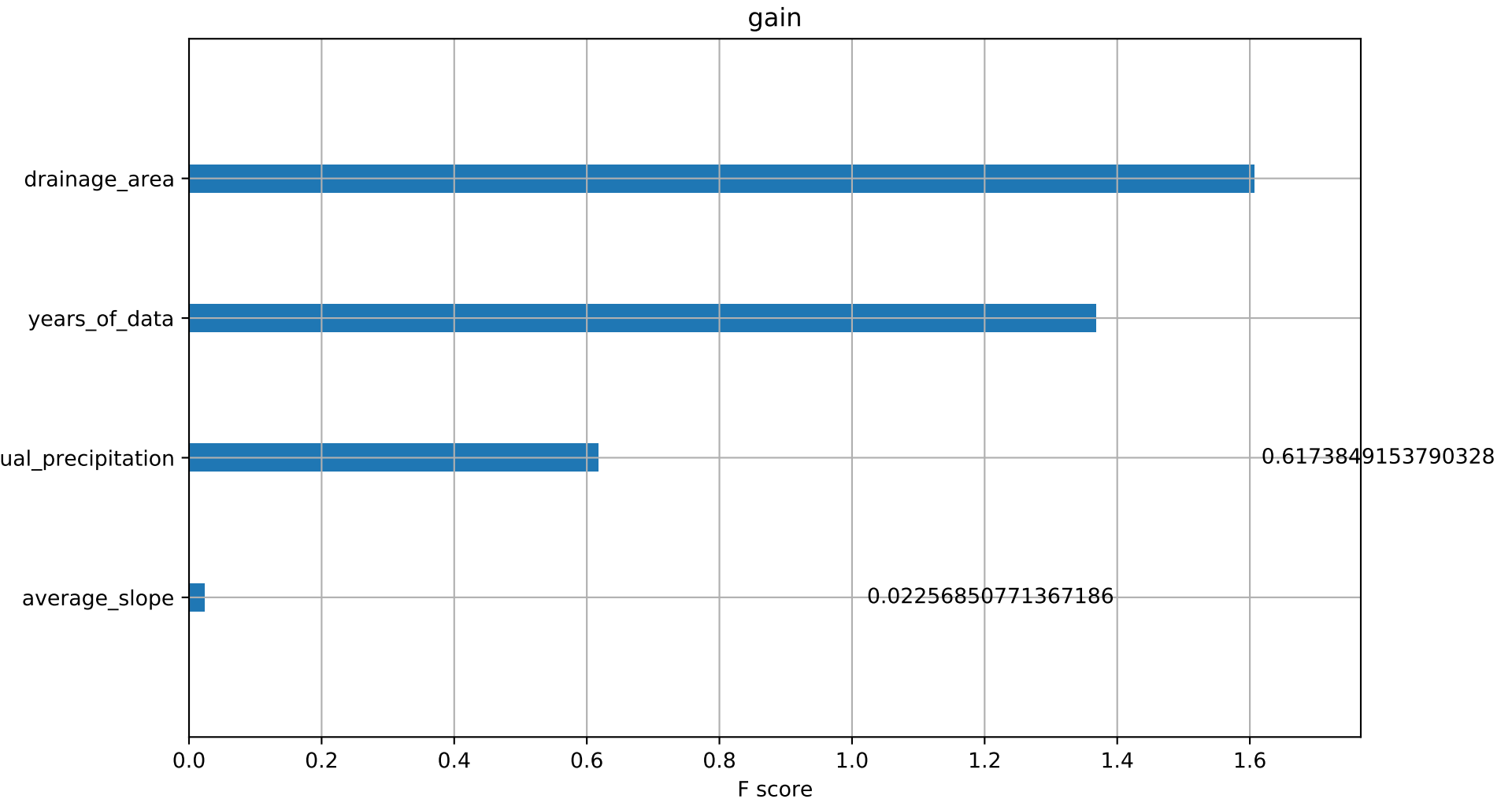
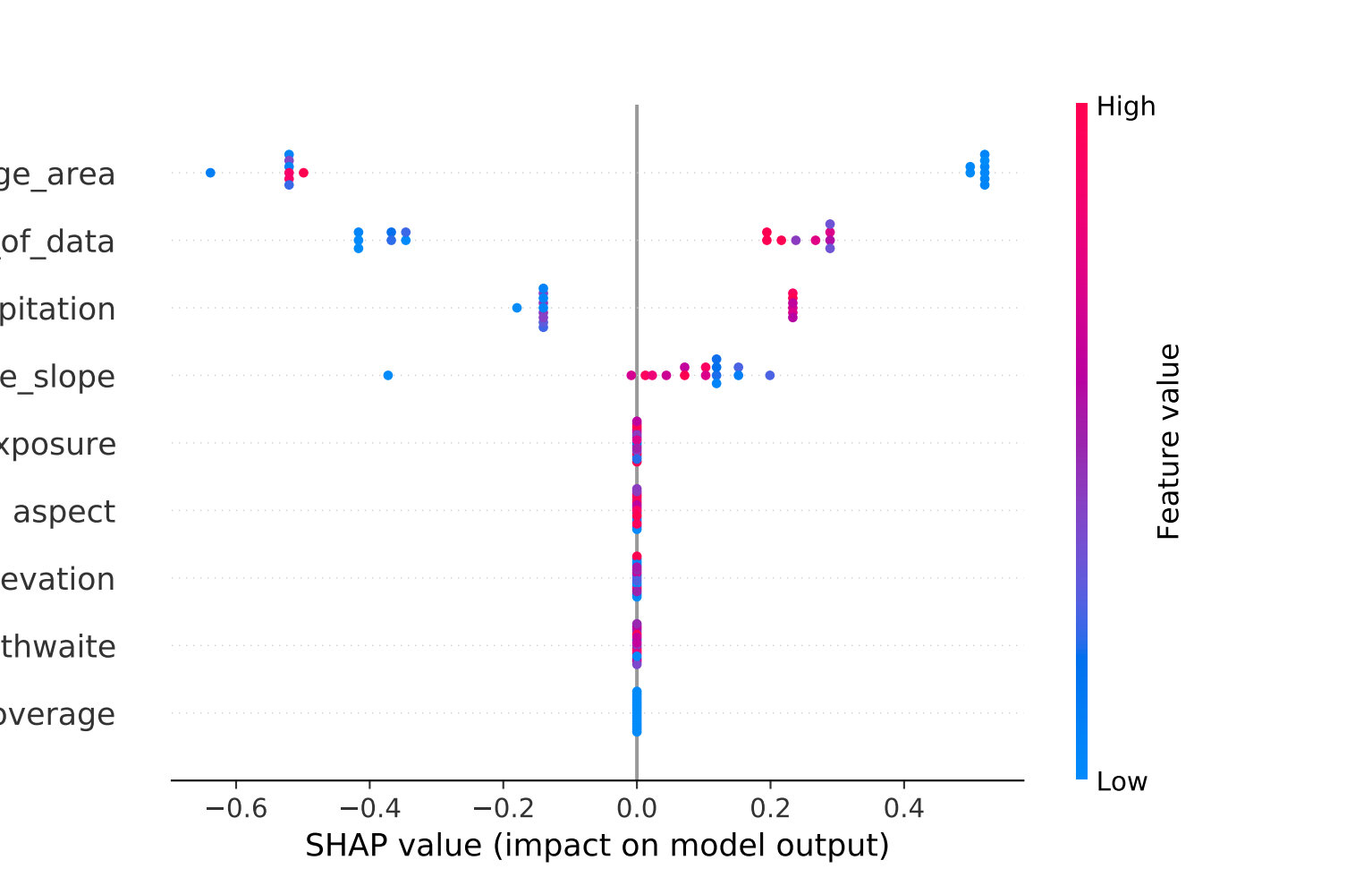

Predicted MAR vs Real MAR
Real MAR
Pred MAR
14
12
10
8
6
4
2
0
−2
0
1
2
3
4
5
6
7


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

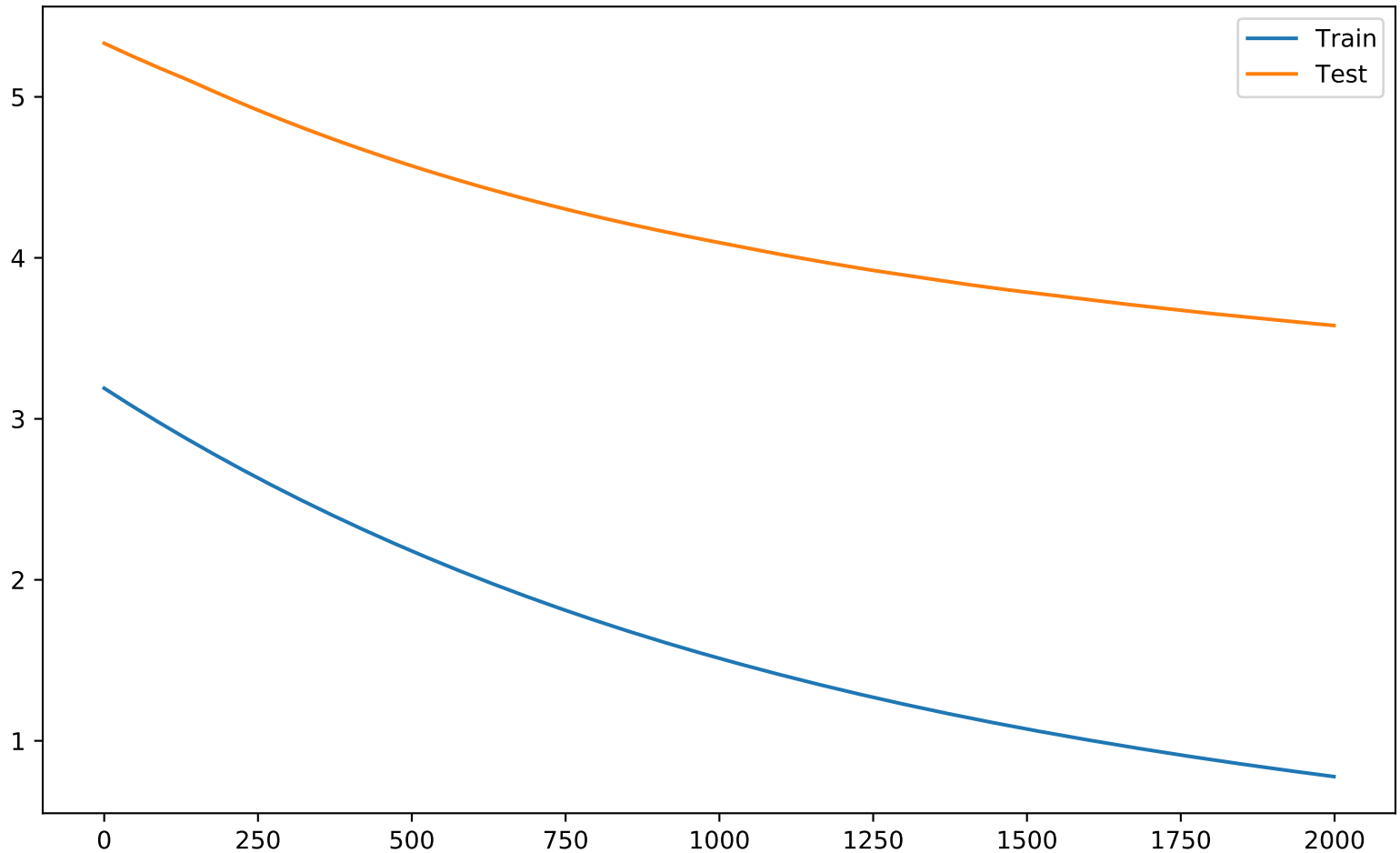

weight
average_slope
drainage_area
years_of_data
ual_precipitation
1528
900
747
496
0
200
400
600
800
1000
1200
1400
1600
F score

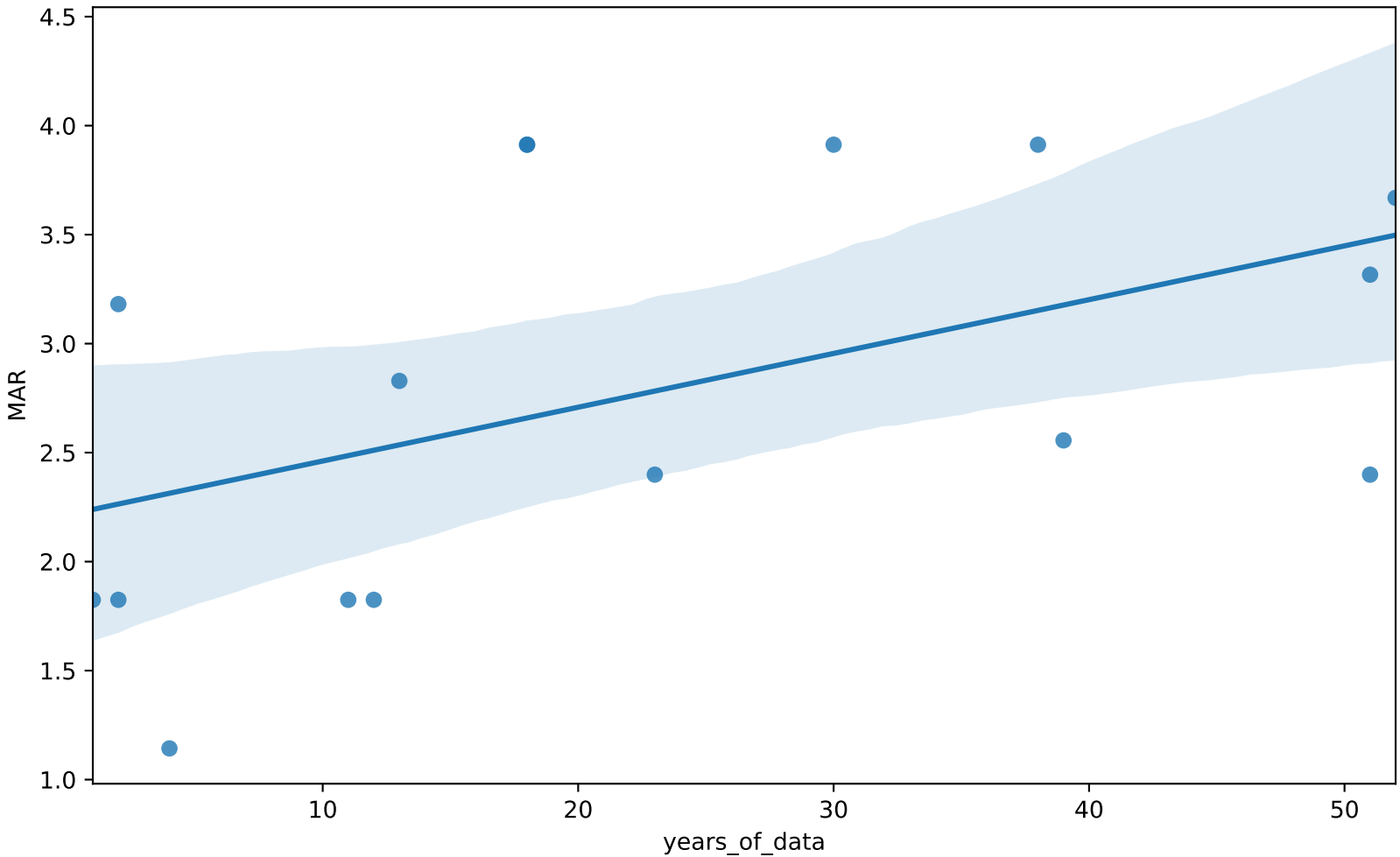

cover
ual_precipitation
drainage_area
years_of_data
average_slope
8.0
8.0
7.234270414993307
4.49541884816754
0
1
2
3
4
5
6
7
8
F score

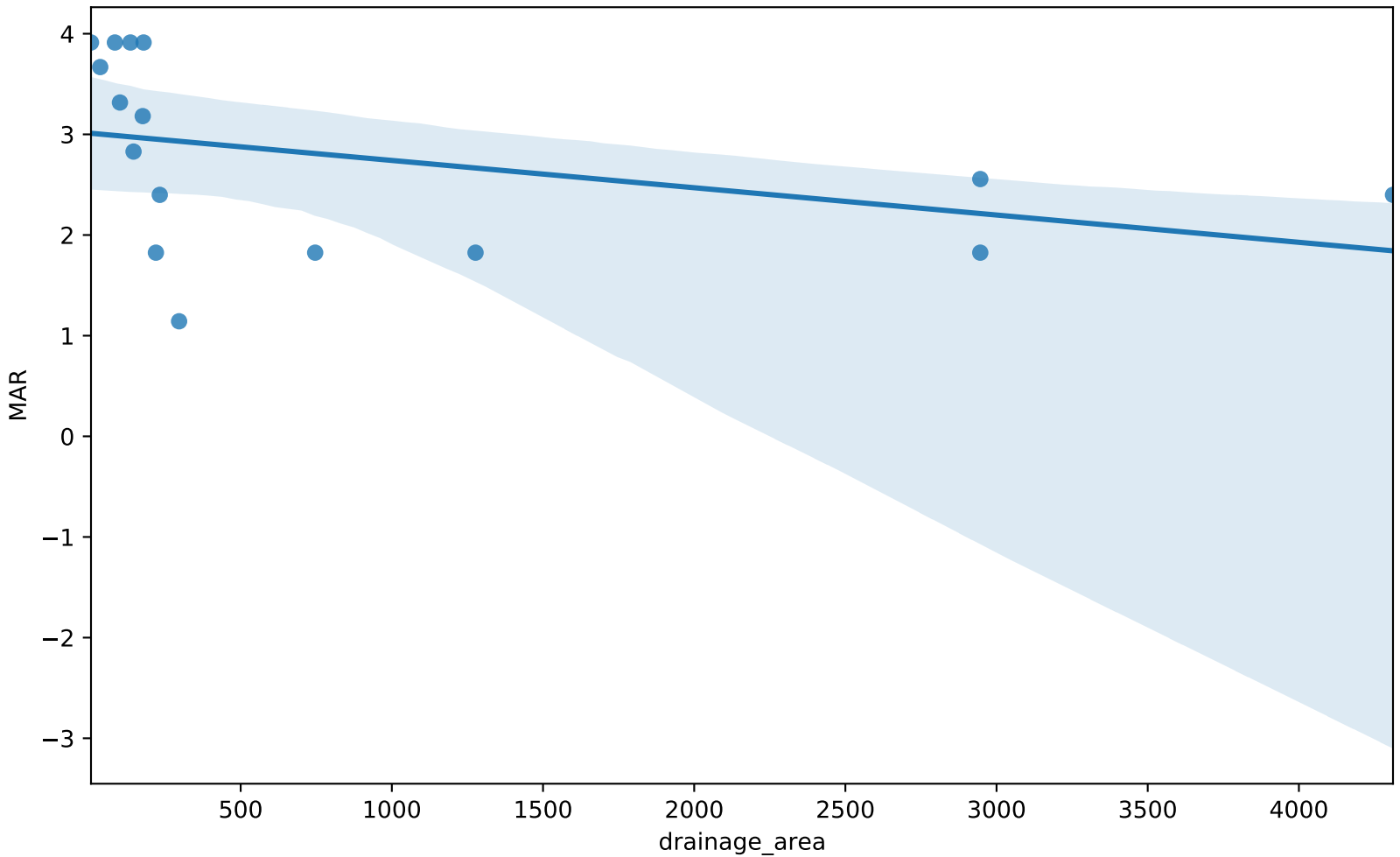

gain
drainage_area
years_of_data
ual_precipitation
average_slope
0.6173849153790328
0.02256850771367186
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
F score

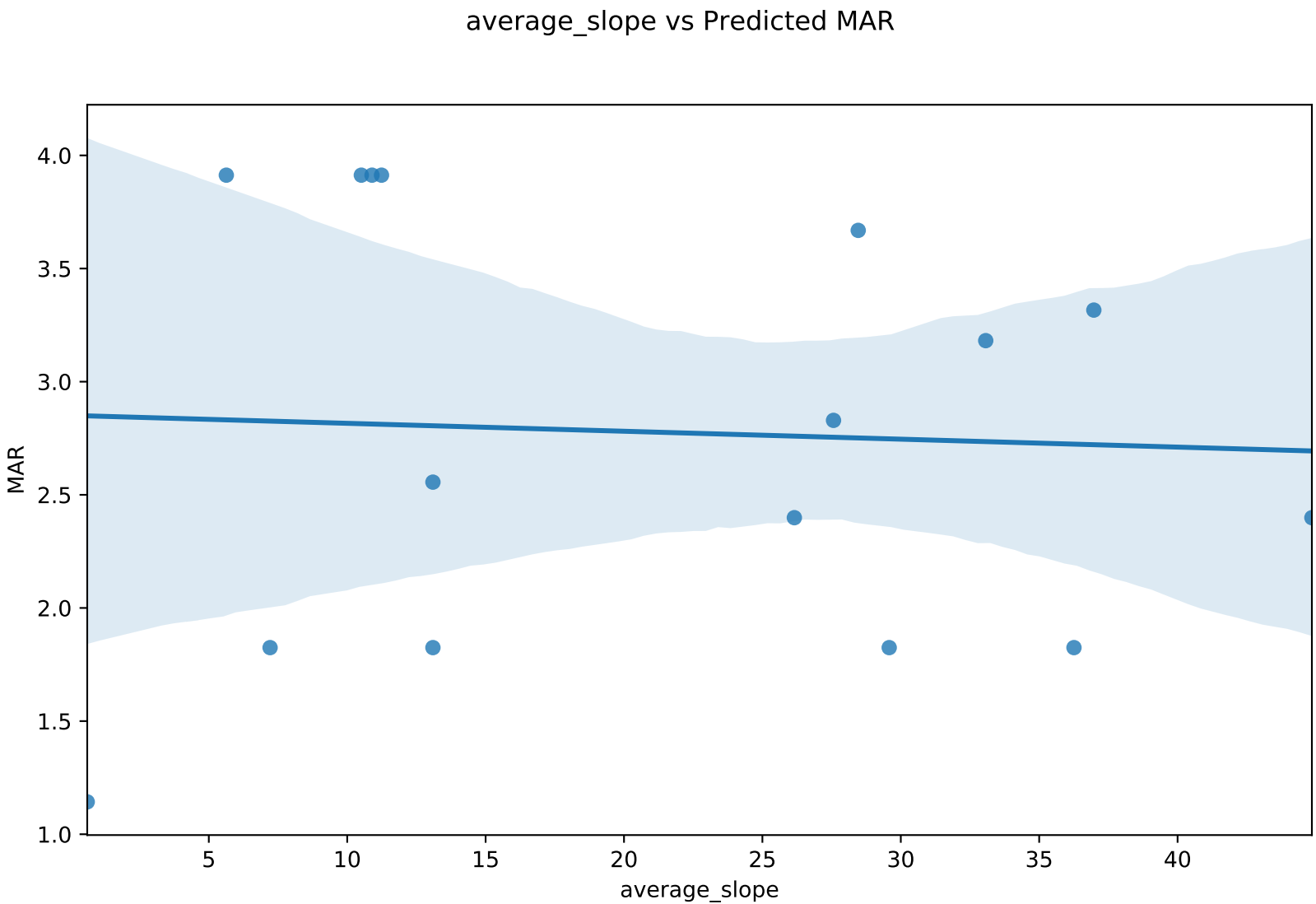

ge_area
of_data
pitation
e_slope
xposure
aspect
evation
thwaite
overage
−0.6
−0.4
−0.2
0.0
0.2
0.4
SHAP value (impact on model output)
High
Feature value
Low

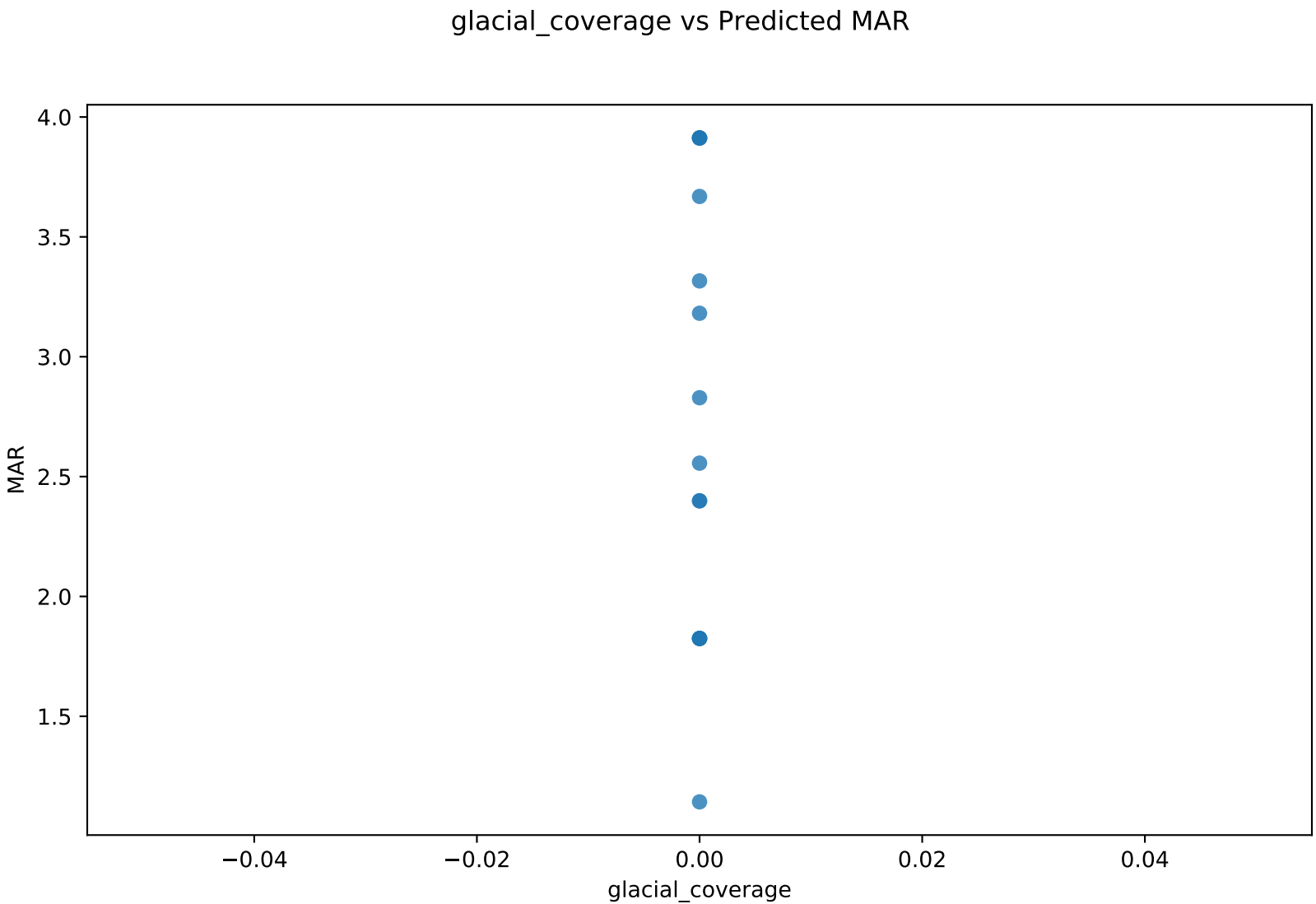
RMSE: 2.590512473093038 R2: 0.16859316083704345

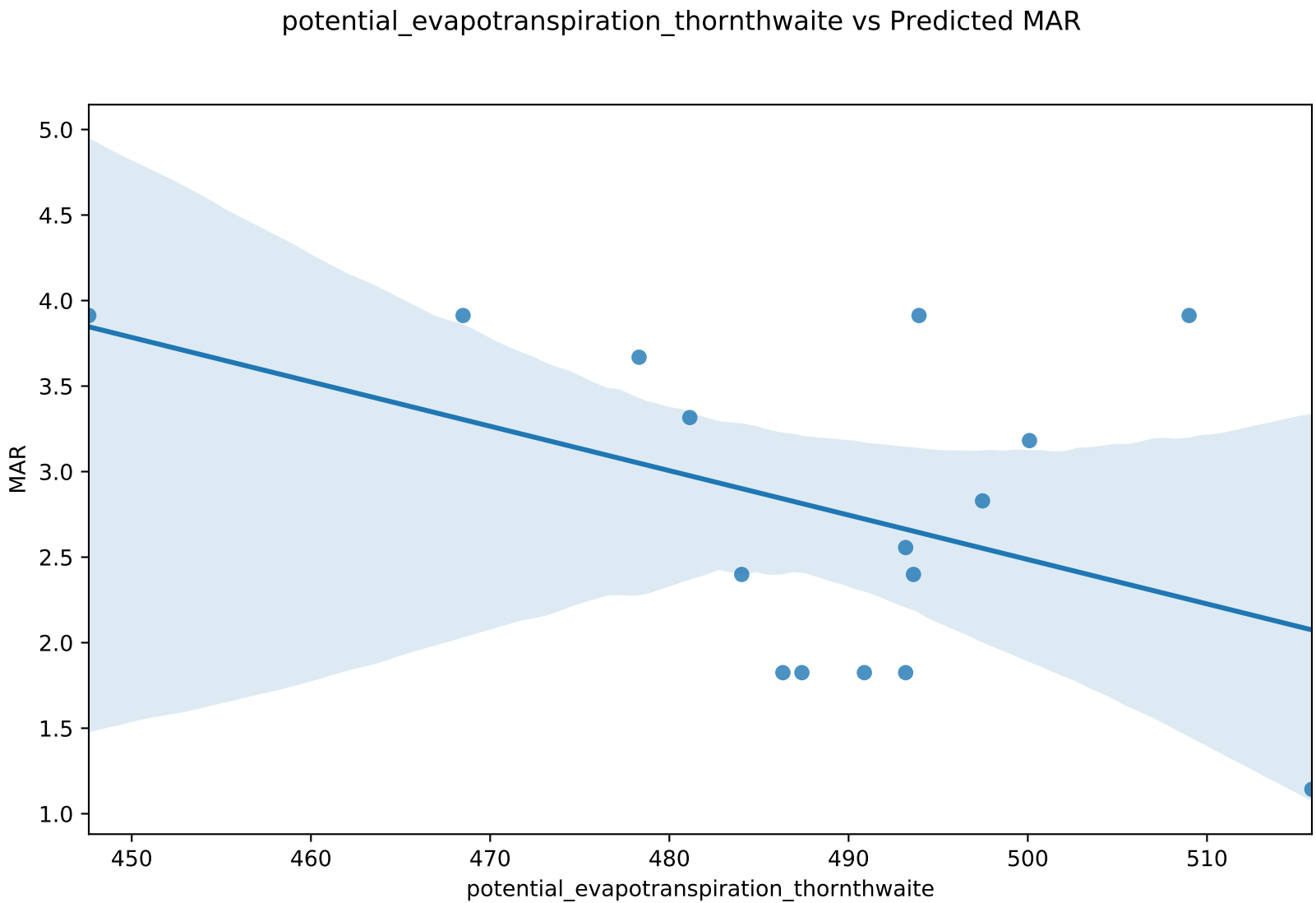


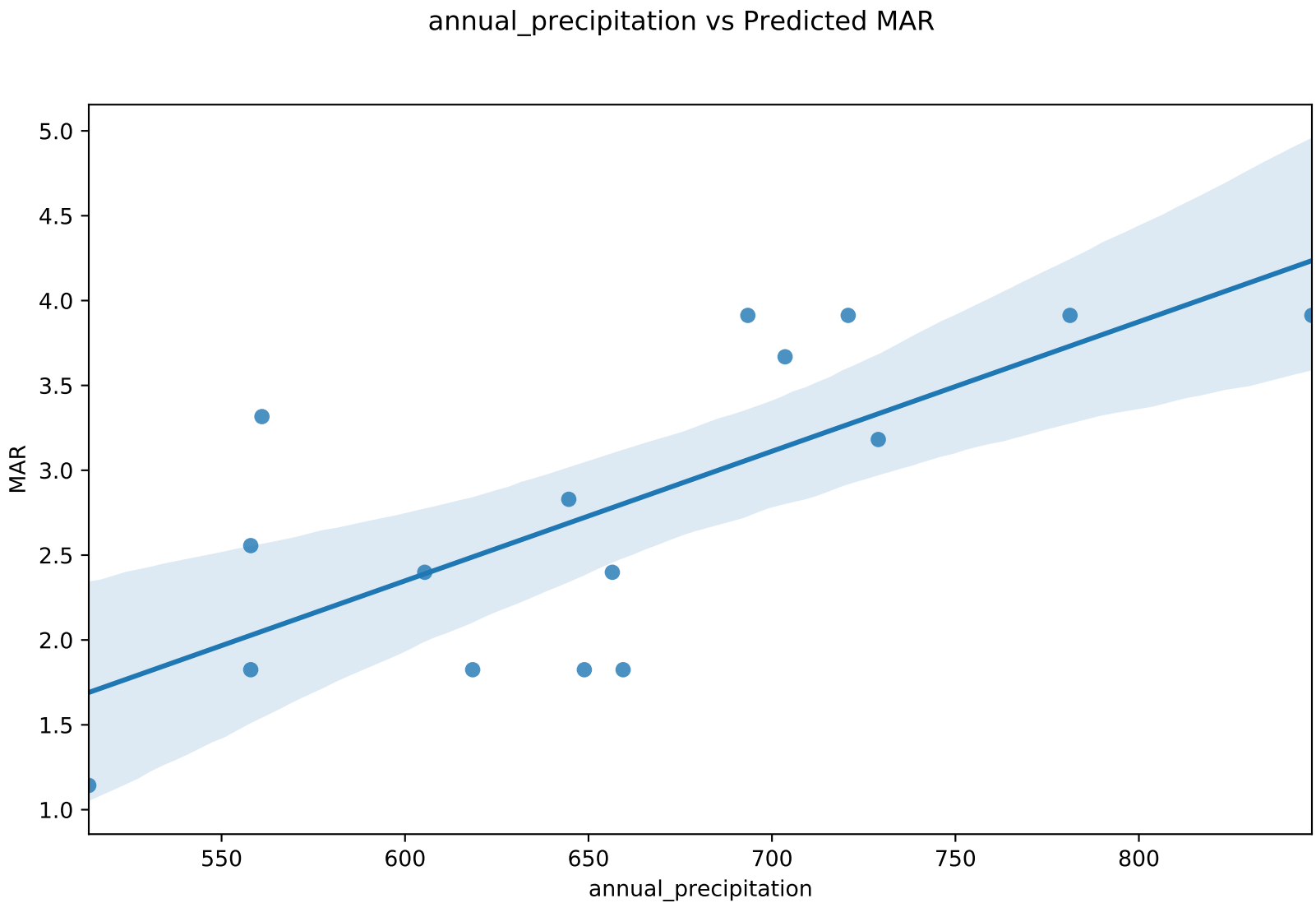

years_of_data vs Predicted MAR
MAR
years_of_data
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
10
20
30
40
50

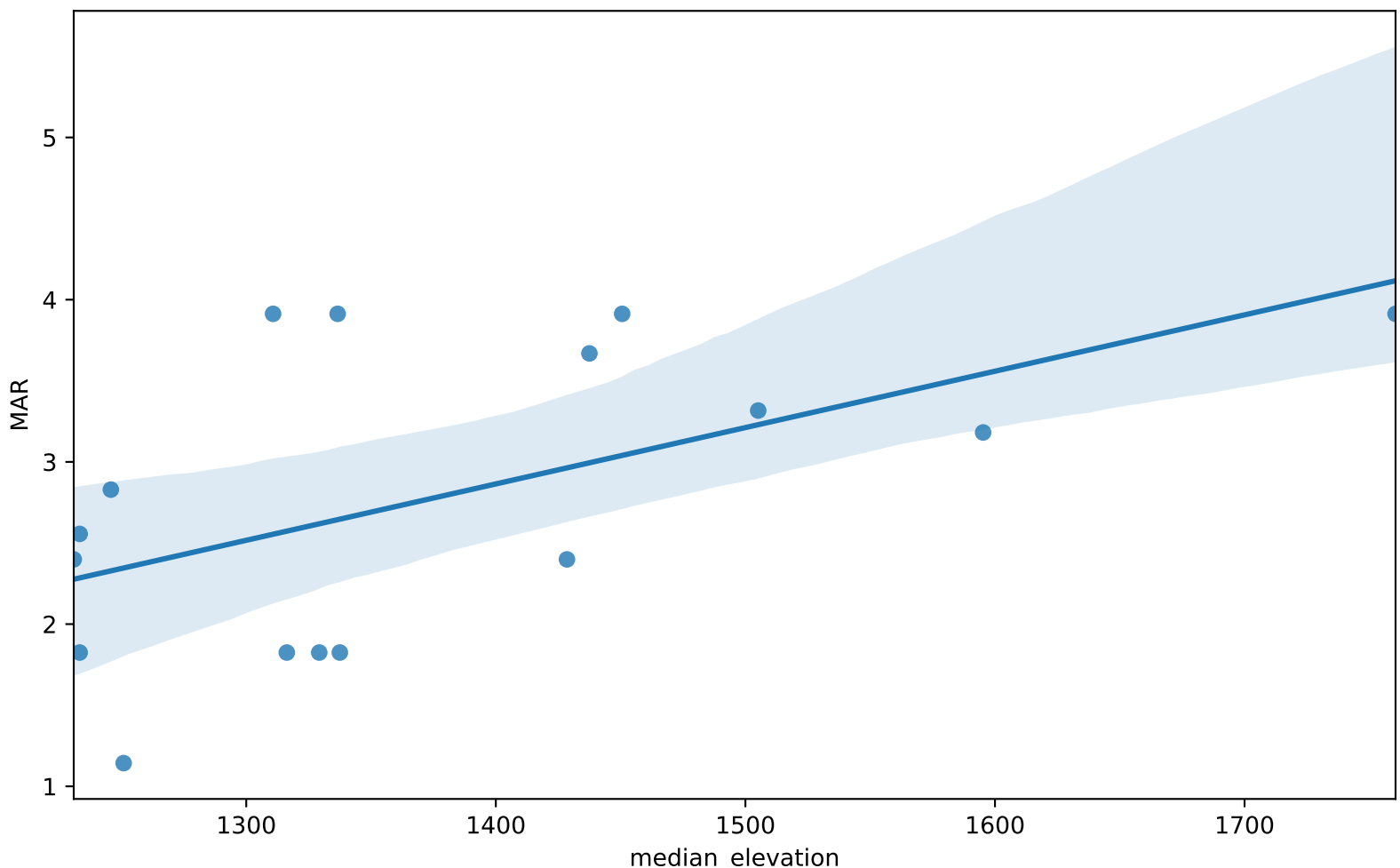

drainage_area vs Predicted MAR
MAR
drainage_area
4
3
2
1
0
−1
−2
−3
500
1000
1500
2000
2500
3000
3500
4000

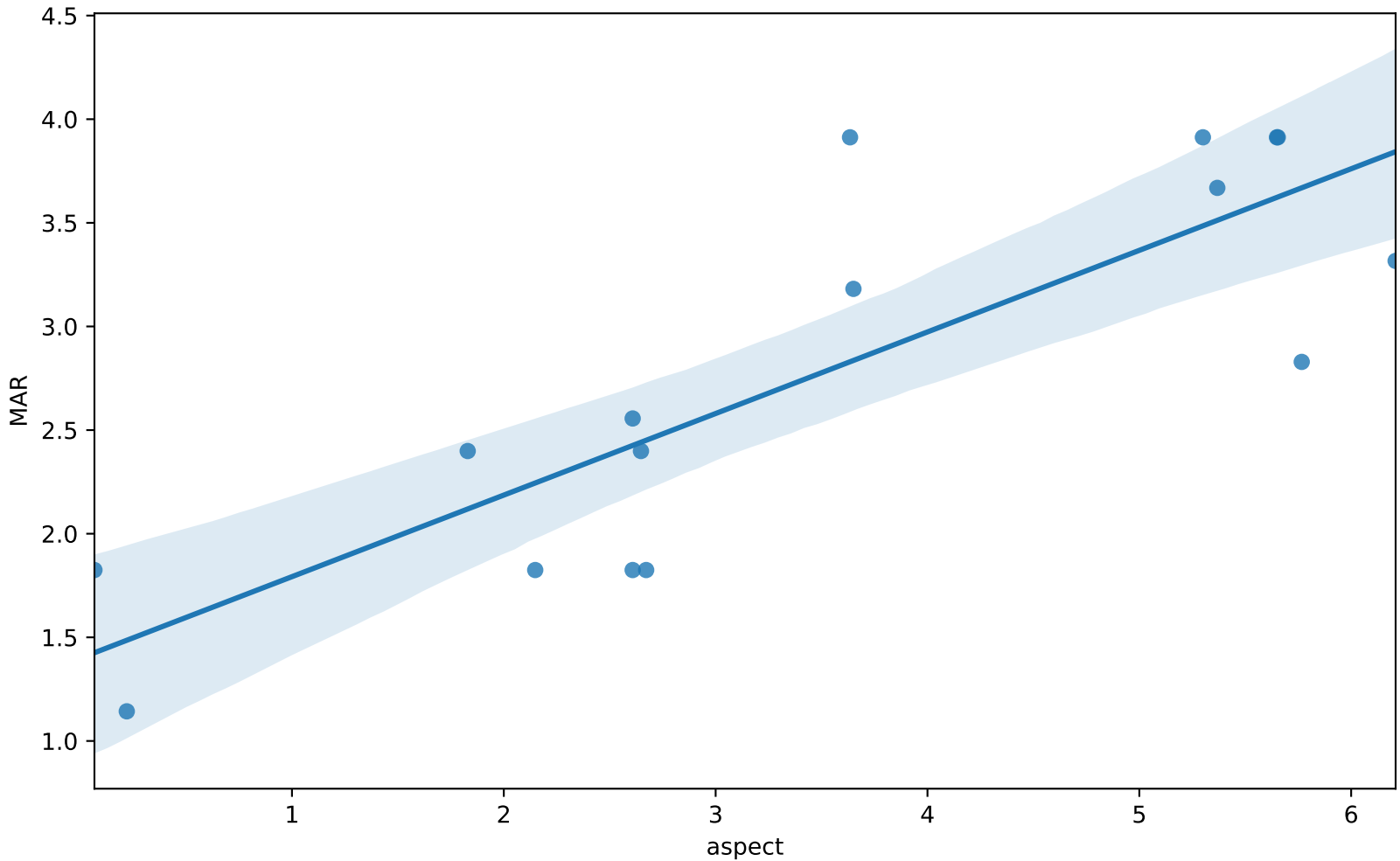

average_slope vs Predicted MAR
MAR
4.0
3.5
3.0
2.5
2.0
1.5
1.0
5
10
15
20
25
30
35
40
average_slope

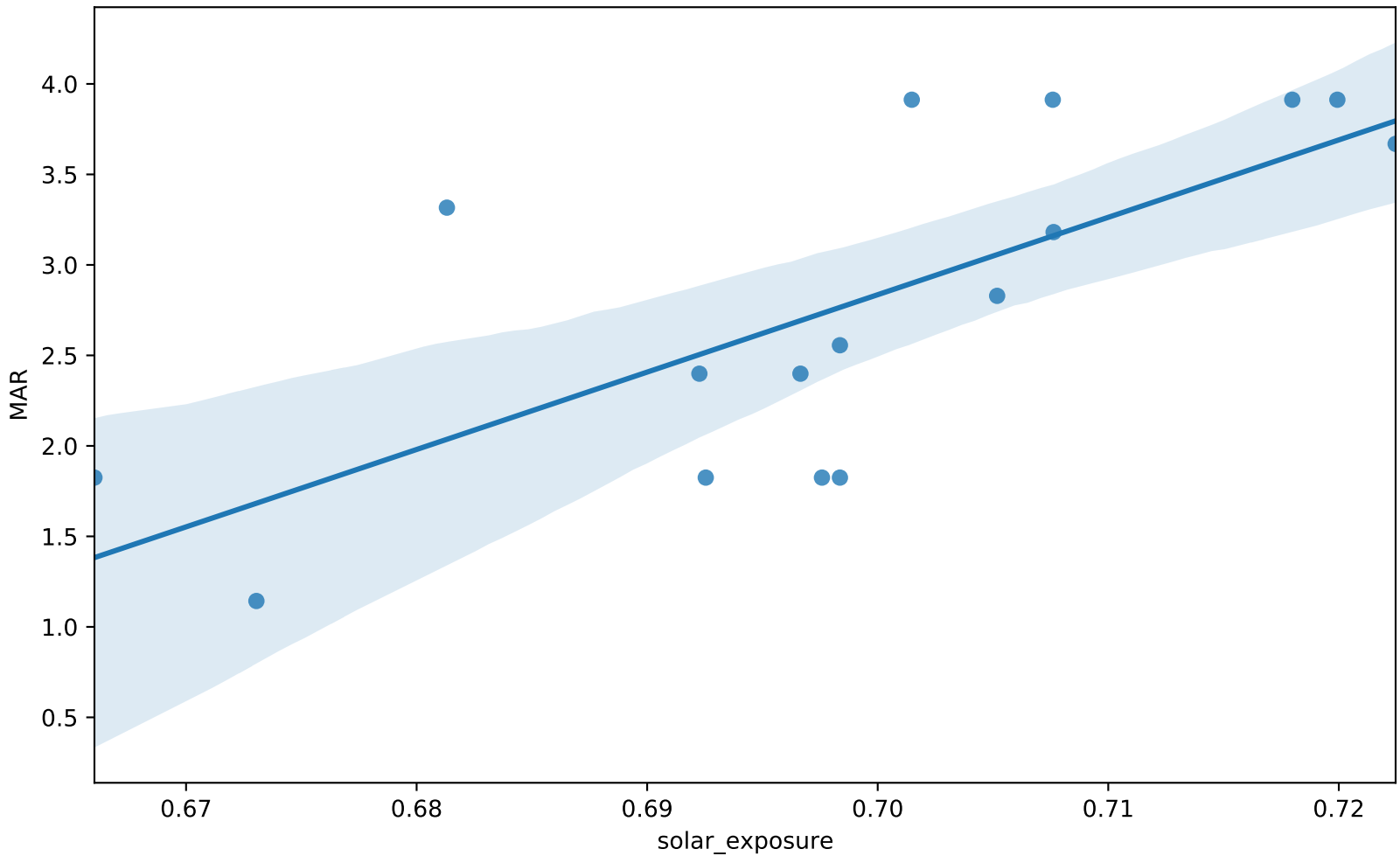

glacial_coverage vs Predicted MAR
MAR
4.0
3.5
3.0
2.5
2.0
1.5
−0.04
−0.02
0.00
0.02
0.04
glacial_coverage


potential_evapotranspiration_thornthwaite vs Predicted MAR
MAR
potential_evapotranspiration_thornthwaite
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
450
460
470
480
490
500
510


annual_precipitation vs Predicted MAR
MAR
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
550
600
650
700
750
800
annual_precipitation


median_elevation vs Predicted MAR
MAR
median_elevation
1
2
3
4
5
1300
1400
1500
1600
1700


aspect vs Predicted MAR
MAR
aspect
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
1
2
3
4
5
6


solar_exposure vs Predicted MAR
MAR
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.67
0.68
0.69
0.70
0.71
0.72
solar_exposure