

// fit the same logistic regression model

Deviance Residuals:

Min	1Q	Median	3Q	Max
-1.8974	-0.6020	-0.4018	-0.2943	2.6427

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-3.813e+00	2.819e-01	-13.525	< 2e-16	***
Calc..Fluid.Hours	8.362e-05	3.635e-04	0.230	0.8181	
Fe	1.115e-01	1.664e-02	6.704	2.03e-11	***
Pb	2.611e-02	8.179e-02	0.319	0.7495	
Cu_cat	4.673e-01	2.229e-01	2.096	0.0360	*
Si_cat	3.314e-01	2.125e-01	1.559	0.1189	
Na_cat	1.574e-01	2.385e-01	0.660	0.5094	
prev_evalb	1.329e+00	2.351e-01	5.656	1.55e-08	***
prev_evalc	-3.317e-01	1.326e+00	-0.250	0.8025	
prev_evalx	3.285e+00	1.433e+00	2.293	0.0219	*

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

Null deviance: 851.33 on 939 degrees of freedom
Residual deviance: 723.67 on 930 degrees of freedom
AIC: 743.67

Number of Fisher Scoring iterations: 5

Troy et no-one.

Phillips et al.

Binary LR model—engine.

Variable	Coefficient	Odds ratio	p-Value
Intercept	4.3712	NA	0.0000
Fe	-0.2520	0.7772	0.0000
Pb	-0.4496	0.6379	0.0005
OXI	-0.1033	0.9019	0.1310
Oilhours	0.0044	1.0044	0.0000
Cu	-0.7511	0.4719	0.0008
Si	-0.8569	0.4245	0.0002
Na	-0.7030	0.4950	0.0011
prevB	-1.4813	0.2274	0.0000
prevC	-2.0613	0.1273	0.0000
prevX	-2.0148	0.1333	0.0021

Confusion Matrix and Statistics

	Reference	
Prediction	A	Not A
A	767	15
Not A	133	25

Accuracy : 0.8426

95% CI : (0.8177, 0.8653)

No Information Rate : 0.9574

P-Value [Acc > NIR] : 1

Kappa : 0.1981

Mcnemar's Test P-Value : <2e-16

Sensitivity : 0.8522

Specificity : 0.6250

Pos Pred Value : 0.9808

Neg Pred Value : 0.1582

Prevalence : 0.9574

Detection Rate : 0.8160

Detection Prevalence : 0.8319

Balanced Accuracy : 0.7386

'Positive' Class : A

// cross-val performance

Confusion Matrix and Statistics

	Reference	
Prediction	A	Not A
A	193	33
Not A	2	6

Accuracy : 0.8504

95% CI : (0.7982, 0.8936)

No Information Rate : 0.8333

P-Value [Acc > NIR] : 0.2737

Kappa : 0.2105

Mcnemar's Test P-Value : 3.959e-07

Sensitivity : 0.9897

Specificity : 0.1538

Pos Pred Value : 0.8540

Neg Pred Value : 0.7500

Prevalence : 0.8333

Detection Rate : 0.8248

Detection Prevalence : 0.9658

Balanced Accuracy : 0.5718

'Positive' Class : A

// test-set performance

// prime
example of
why accuracy
sucks