

Mixed effect logistic regression instructions

This tool can be used to:

- Perform Mixed effect logistic regression.
- Obtain model stats, random effect stats and fixed effect stats.

Instructions:

1) Copy-paste data in the text-box in the following format directly from a spreadsheet.

	A	B	C	D	E	F	G
1	ID	Speaker	Gender	Age	Class	Syntax	Outcome
2	1	M31	A_male	77	A_DE	B_predica	B_very
3	2	F17	B_female	40	C_C1	B_predica	B_very
4	3	M30	A_male	70	D_AB	B_predica	B_very
5	4	F32	B_female	75	B_C2	B_predica	B_very
6	5	F17	B_female	40	C_C1	B_predica	B_very
7	6	M30	A_male	70	D_AB	B_predica	B_very
8	7	F19	B_female	41	A_DE	A_attribu	B_very
9	8	F15	B_female	37	A_DE	B_predica	B_very
10	9	F1	B_female	14	B_C2	B_predica	A_really
11	10	F4	B_female	20	C1	B_predica	A_really

Individual text/speaker as random effect.

Fixed effects

Categorical outcome

2) Select parameters for your model

2. Type in the exact name of the outcome variable.

3. Type in the exact name(s) of the fixed effect predictor(s) [use ; as separator].

4. Type in the exact name(s) of the random effect predictor.

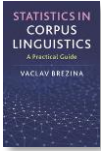
5. Decide if you want to include predictor interactions.

Yes, include all Yes, include some No

6. Type in the exact names of the predictors with interactions [use ; as

Note: Predictors and their interaction should be theoretically motivated and their number should be limited. This technique is not suitable for exploratory analysis.

3) Click on 'Build model'



1. Paste data in the text area. For help click [here](#).

ID	Speaker	Gender	Age	Class	Syntax	Outcome
1	M31	A_male	77	A_DE	B_predicative	B_very
2	F17	B_female		40	C_C1	B_predicative B_very
3	M30	A_male	70	D_AB	B_predicative	B_very
4	F32	B_female		75	B_C2	B_predicative B_very
5	F17	B_female		40	C_C1	B_predicative B_very
6	M30	A_male	70	D_AB	B_predicative	B_very
7	F19	B_female		41	A_DE	A_attributive B_very
8	F15	B_female		37	A_DE	B_predicative B_very
9	F1	B_female		14	B_C2	B_predicative A_really
10	F4	B_female		20	C1	B_predicative A_really
11	M22	A_male	51	D_AB	A_attributive	B_very
12	F21	B_female		46	C_C1	A_attributive B_very
13	F9	B_female		30	B_C2	B_predicative B_very

2. Type in the exact name of the outcome variable.

3. Type in the exact name(s) of the fixed effect predictor(s) [use ; as separator].

4. Type in the exact name(s) of the random effect predictor.

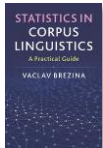
5. Decide if you want to include predictor interactions.

Yes, include all Yes, include some No

6. Type in the exact names of the predictors with interactions [use ; as separator].

4) The output

The output contains three types of information: i) model stats, ii) random effect stats and iii) fixed effect stats. The focus is on the interpretation of the fixed effects.



Brezina, V. (2018). *Statistics in Corpus Linguistics: A Practical Guide*. Cambridge University Press.

Model statistics:

AIC 1629.0, BIC 1683.0, logLik -804.5, deviance 1609.0, df.resid 1636


Random effects:

Groups name	Variance	Std. Dev.
Speaker (Intercept)	0.9816	0.9907

Fixed effects:

	Estimate (log odds)	Standard Error	Z value (Wald)	p-value
(Intercept)	-0.71877585	1.27838289	-0.56225396	0.57394300
GenderB_female	0.43845797	0.86281014	0.50817434	0.61133109
Age	0.04592457	0.01288860	3.56319378	0.00036637
ClassA_DE	-0.19826559	1.17497220	-0.1689150	0.86796357
ClassB_C2	-0.04097618	1.17497220	-0.3402	0.97207733
ClassC1	-0.99739597	1.57624776	-0.63276598	0.52688647
ClassC_C1	-0.13734427	1.17497220	-0.11689150	0.90694603
ClassD_AB	0.56367671	1.17408373	0.48009925	0.63115682
GenderB_female:Age	-0.01467338	0.01912162	-0.76737100	0.44286096

Statistically significant

 R code that performs the analysis can be viewed and copied when going with the mouse pointer to [R code](#)