

Discriminant Features and Temporal Structure of Nonmanuals in American Sign Language

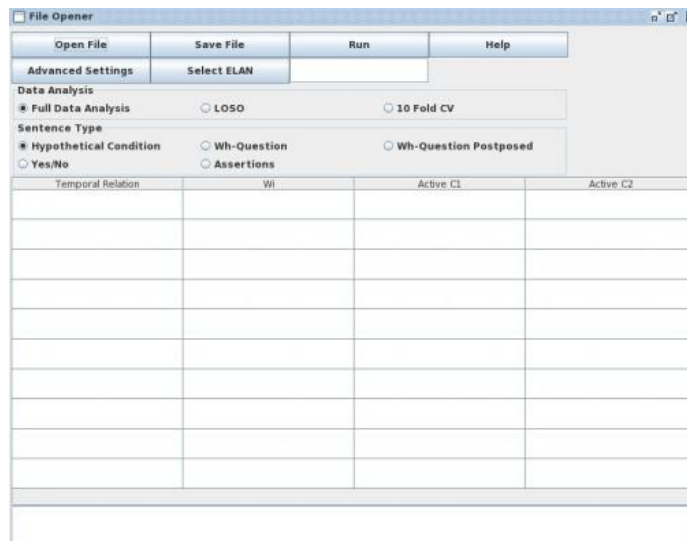
Tutorial on Temporal Analysis Software for Nonmanuals.

We have created a Java JAR executable that is compatible with java JRE 1.6. In

Windows: Double click in the file fslguibeta.jar.

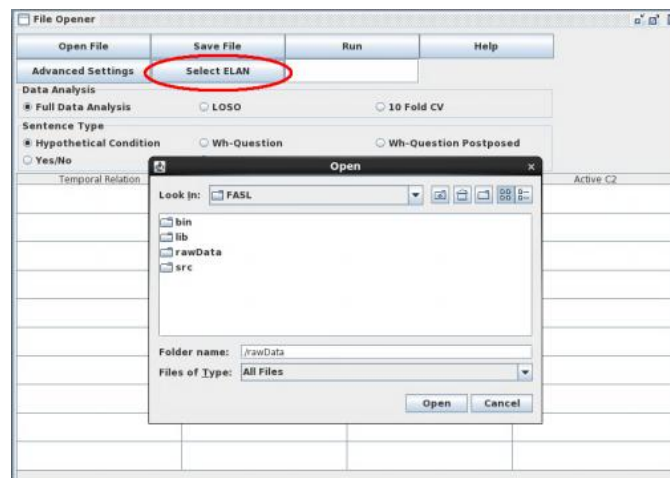
Linux: In the console type “java -jar fslguibeta.jar”

1. That will open the following interface:



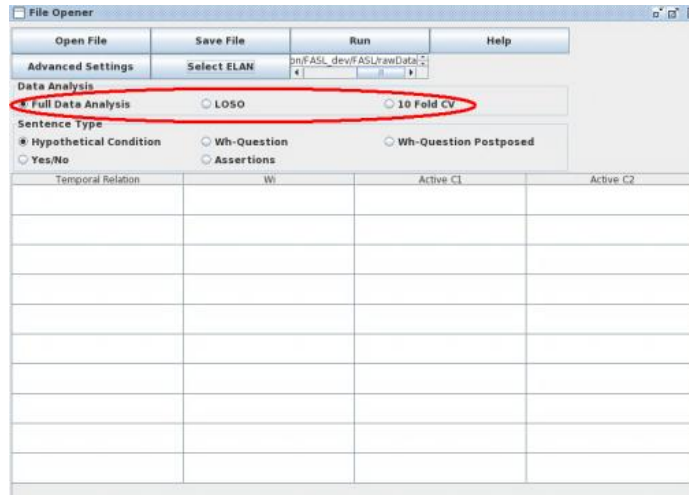
2. Loading TDF exported ELAN files.

- a. Make sure that the ELAN annotations were save as a Tab Delimited File.
- b. Select the **FOLDER** with all the TDF to be analyze.



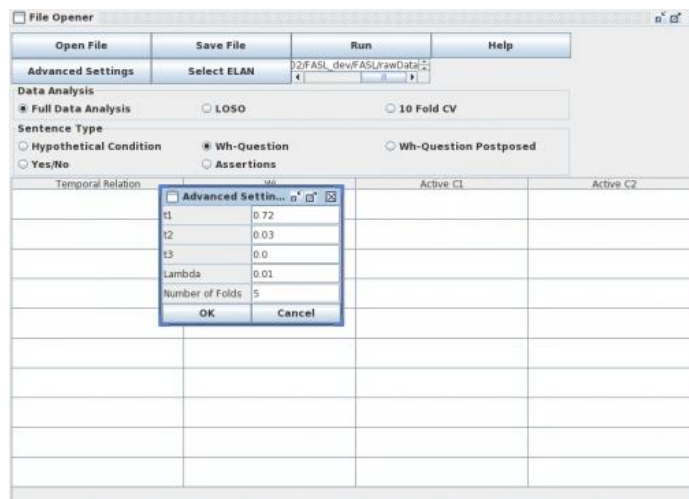
3. Selecting the type of analysis.

- a. Full Analysis: It uses all the data as training and testing data.
- b. Leave one sentence out (LOSO): It trains with all the samples but one that is going to be for testing. Depending on the number of samples it can take several hours (or days).
- c. N fold cross-validation: It divides the samples in N subgroups, N-1 are use for training and the left out fold is used for testing.



4. Advanced parameters:

- a. t1, t2 and t3: Thresholds defined in the paper with respect to closeness between events, and short term memory in seconds.
- b. Lambda: Regularization parameter.
- c. Number of folds: Number of folds for N Fold CV.



5. Press the button “Run” to execute the program.

Temporal Relation	Wii	Active C1	Active C2
{Brows move down} equals {Br...	1.0	89.42857142857143	23.234852278417627
{Brows move up} equals {Brow...	0.5810264335641274	10.571428571428571	70.55583375062594
{Mouth shape round} equals {...	0.511927904747384	82.85714285714286	46.670005007511264
{Mouth shape flat} starts {Bro...	0.43610182494720...	10.285714285714285	2.2033049574361545
{Mouth shape round} starts {H...	0.4336991195075011	11.714285714285715	1.1517275913870806
{Brows move down} finishes {M...	0.40279829431463...	0.0	2.9043565348022033
{Teeth touch Lip} before {Mout...	0.40224354669920...	0.0	7.511266900350526
{Mouth shape flat} during {Hea...	0.38928007239587...	6.2857142857142865	5.908863294942414
{Mouth shape round} before {B...	0.3874440679907243	0.0	1.9529293940911365
{Mouth closed} starts {Brows ...	0.35961900704157...	11.714285714285715	2.2033049574361545

6. Additional functionality: Save results and load results using the buttons on the interface.