Bully Topic Modeling Tool Instructions

Installation:

Step 1:
Make sure you have the most recent version of python.
Found here: https://www.python.org/downloads/

Step 2:
Make sure you have the most recent version of pip.
To do this simply open command prompt and type

For Windows:
python -m pip install -U pip setuptools

Other:
pip install -U pip setuptools

Further documentation can be found here:
https://packaging.python.org/installing/#requirements-for-installing-packages

Step 3:
Install NLTK
To do this simply type “pip install NLTK” in command prompt

Step 4:
Install stop-words
To do this simply type “pip install stop-words” in command prompt

Step 5:
Obtain the file path of the downloaded file

If this is unknown, run the python file getFilePath in the installed IDLE that comes with python.
To do this right click getFilePath.py and select edit with Idle and click Edit with Idle 3.5.
After the code is open hit f5 or run it from the run section in the top.
This will print out the directory.

The example directory for this documentation and further examples will be:
C:\Users\Jordan\Documents\BullyTopicTool

Step 6:
Install numpy and scipy

For 32 bit systems type the following in command line substituting the example file path with your working directory's file path. Each pip install requires its own line:
pip install C:\Users\Jordan\Documents\BullyTopicTool\numpy-1.11.2+mkl-cp35-cp35m-win32.whl
pip install C:\Users\Jordan\Documents\BullyTopicTool\scipy-0.18.1-cp35-cp35m-win32.whl

For 64 bit systems type the following in command line substituting the example file path with your working directory's file path. Each pip install requires its own line:
pip install C:\Users\Jordan\Documents\BullyTopicTool\numpy-1.11.2+mkl-cp35-cp35m-win_amd64.whl
pip install C:\Users\Jordan\Documents\BullyTopicTool\scipy-0.18.1-cp35-cp35m-win_amd64.whl

Step 7:
Install gensim
To do this simply type the following in command line:
pip install gensim

Step 8:
Install openpyxl
To do this simply type the following in command line:
pip install openpyxl

Running the program:
Step 1:
To run the program right click BullyTMT.py, select Edit with idle, and click the Edit with Idle 3.5 button that appears to the side

Step 2:
After the code is open hit f5 to run or click Run at the top of the idle window and click Run Module f5

User Operation:

Loading the excel file:

To select an Excel file either type the desired file's file path in the entry field under the Setup section, which is colored light blue, or click the adjacent "Browse" button to select the file via windows file explorer.

After a file is selected, click the "Load File" button in the same group. This will begin the reading and sorting of the selected Excel file. The "Load File" button will turn red and change to "Loading…" while the file is being loaded and return to the original state when completed.

Enhancements:

Generating a Topic Model:

To generate a Topic Model for enhancements, enter a number in the entry field in the "Enhancements" section under the "Number of Topics to Generate" text then click the "Generate" Button. The "Generate" button will turn red and change to "Processing…" while the file is being loaded and return to the original state when completed.

Loading a previously saved Topic Model:

To load a previously saved enhancements Topic Model, click the "Load Saved Topic Model" button in the "Enhancements" section and use the windows file explorer to select the desired file. This loads the previous LDA with the previous number of topics generated. By default, files are saved and searched for as a .LDA.

Generating Graphs:

To generate a desired graph, simply click the button of which graph in the "Enhancements" section you'd like to generate. By default the program saves generated graphs in the current directory when generated. All graphs are interactive and work offline. By interactive it is meant that clicking a topic in the top right corner toggles it on or off and a user can select specific portions to be shown by themselves by clicking and dragging over the desired section.

"Enhancements Over Time" shows n topics and how many times each topic occurs in the excel file with respect to time as a line graph.Where topic occurrence is determined by searching for a topic's predominant topic words in the file, and n is the number of generated topics selected by the user.

"Enhancement Topic Occurrences" shows n topics and how many times each topic occurs in the excel file in total as a bar chart. Where topic occurrence is determined by searching for a topic's predominant topic words in the file and n is the number of generated topics selected by the user.

Saving a Topic Model:

To save a generated enhancement Topic Model, simply click the “Save Topic Model” button in the “Enhancements” section and select the directory you wish it to be saved in. By default, no extension as needed as it uses .LDA.

Bugs:

Generating a Topic Model:

To generate a Topic Model for bugs, enter a number in the entry field in the “Bugs” section under the “Number of Topics to Generate” text then click the “Generate” Button. The “Generate” button will turn red and change to “Processing…” while the file is being loaded and return to the original state when completed, and a list of n topics is shown that can be selected and deselected by clicking them where n is the amount of topics generated.

Loading a previously saved Topic Model:

To load a previously saved bugs Topic Model, click the “Load Saved Topic Model” button in the “Bugs” section and use the windows file explorer to select the desired file. This loads the previous LDA with the previous number of topics generated, and a list of n topics is shown that can be selected and deselected by clicking them where n is the amount of topics generated.. By default, files are saved and searched for as a .LDA.

Generating specific topics’ severities with respect to time:

To generate one or more topics’ severities with respect to time, click to select which topics from the generated list you wish to have graphed. A clicked item can be clicked again to deselect it. After all desired topics are selected simply click the “Graph Selected Topics’ Severities” button to generate the graph(s). The graph(s) are interactive and work offline. By interactive it is meant that clicking a topic in the top right corner toggles it on or off and a user can select specific portions to be shown by themselves by clicking and dragging over the desired section.

Generating other graphs:

To generate a desired graph, simply click the button of which graph in the “Bugs” section you’d like to generate. By default the program saves generated graphs in the current directory when generated. All graphs are interactive and work offline. By interactive it is meant that clicking a topic in the top right corner toggles it on or off and a user can select specific portions to be shown by themselves by clicking and dragging over the desired section.

“Graph All Bug Topic Occurrences” shows n topics and how many times each topic occurs in the excel file with respect to time as a line graph. Where topic occurrence is determined by searching for a topic’s predominant topic words in the file, and n is the number of generated topics selected by the user.

“Graph All Bug Severity Occurrences” shows the number of occurrence of each of the 5 bug severity categories in the excel file as a bar chart.

Saving a Topic Model:

To save a generated bug Topic Model, simply click the “Save Topic Model” button in the “Bugs” section and select the directory you wish it to be saved in. By default, no extension as needed as it uses .LDA.

In Memory of Cory Anderson

August 2016 - October 2016
He disappeared from our group but not our hearts.