Digital Integration Teaching Initiative

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Text Analysis using the DataBasic Suite

DataBasic website: https://databasic.io/en/

Data Basic is an easy-to-use package of data analysis tools for beginners.

Data basic includes four tools:

- 1. WordCounter (text analysis)
- 2. WTFcsv (data visualization and analysis)
- 3. SameDiff (text analysis)
- 4. ConnectTheDots (network analysis)

Important Terminology

- **Corpus** (plural: corpora): a text or collection of texts that is used for analysis.
 - Example: One could create a corpus of all of Frederick Douglass's speeches to trace his language use over time.
- **nGram**: A continuous sequence of *n* items in a text.
 - For example, in Frederick Douglass's speeches, a bigram (or 2 continuous tokens) could be 'United States' and a trigram (3 tokens) could be 'justice for all'.
- **Stop words**: words that appear frequently in a language, like pronouns, prepositions, and basic verbs. These are often removed for computational analysis.
 - Some English stopwords include: a, the, she, he, I, me, us, of, is, would, could, should, etc.
- **Computational Text Analysis**: Text analysis is making inferences based on textual data. Computational text analysis (CTA) involves a computer drawing out patterns in a text, and a researcher interpreting those patterns. CTA includes methods such as word count frequency, nGrams, and sentiment analysis. CTA is similar to statistical analysis, but the data are texts.
- **Word Count Frequency:** Counting the total times a word appears in a text/corpus or the percentage of how often it appears.

WordCounter website: https://databasic.io/en/wordcounter/

What is WordCounter?

WordCounter analyzes a corpus to count words and n-grams. Word counts, bigram, and trigram data can then be downloaded as a .csv for further analysis.

Step-by-step WordCounter guide:

1. To use your own text, select: paste text, upload a file, or paste a link.

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- 2. Click on count.
 - a. Note that 'ignore case' and 'ignore stopwords' are selected by default.
 - b. See how your results vary if you turn these off!
- 3. WordCounter outputs a word cloud and a list of top words, bigrams, and trigrams.
- 4. You can export files with the top words, bigrams, and trigrams by scrolling to the bottom of the page and selecting the export option you want.

SameDiff website: https://databasic.io/en/samediff/

What is SameDiff?

SameDiff compares one corpus or text to another corpus or text and tells the user how similar they are based upon a cosine similarity algorithm.

Step-by-Step SameDiff Guide:

- 1. Select 'upload files.'
- 2. Click on browse file 1 and navigate to the first text.
- 3. Repeat step 2 for the second text.
- 4. Click on 'compare.'
- 5. SameDiff outputs a similarity score, total word counts, and the specific words that are similar and the words that differentiate the two documents.
- 6. You can scroll to the bottom to find options for exporting your results.