Rough Project Overview

1. Test word2vec, topic2vec or other word-embedding technique for source identification (if not really working, I’ll add some sporting/car data. If still not working well, then SVM with LIME instead of word-embedding).
2. Test LIME with word-embedding (stop words vs no stop words)
3. Identify important terms by manually looking at LIME for trends: what is the nature of these terms? Clearly ideologically relevant or seemingly random or mix
4. Your Ideas?

Word embedding (word2vec, topic2vec, sentence2vec) are sometimes used as a technique for author identification of text by detecting subtle differences in vocabulary, word frequency, and word associations. The extent to which this same technique can be used to identify the origin of text from multi-author publications such as website, newspaper, or journal is of considerable interest. In addition, author identification tasks frequently involve a ‘black box’ where the logic behind authorship ascription is hidden. A technique for explainable algorithms, LIME provides a way to display this “black-boxed” reasoning. The task is for the student is to determine the effectiveness (accuracy, precision) of: 1. Word-embeddings are useful for source identification of text from multiauthor publications. 2. LIME provides intelligible explanations for this source ascription.

The general idea is to make something that can, in an automated or at least semi-automated way, highlight ideologically delineating terms. You could think of it as a kind of political website fingerprint which is also intelligible to a humans AND hopefully ideologically revealing.