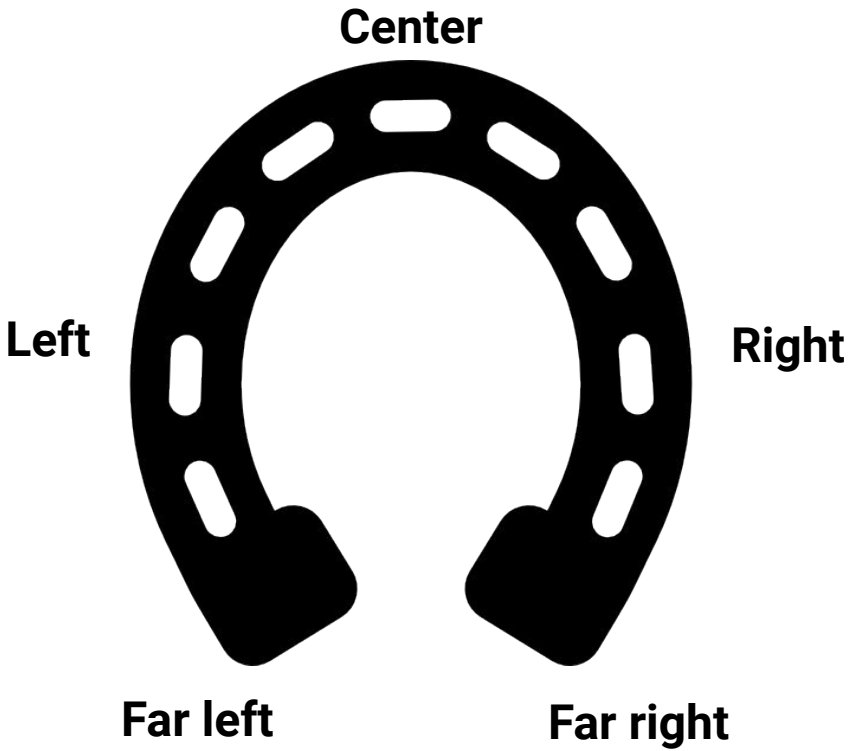
Horseshoes and handgrenades

Evaluating whether natural language processing (NLP) gives support to the Horseshoe Theory of Politics

This is a horseshoe



Horseshoe Theory (politics)

In political science and popular discourse,[1] the **horseshoe theory** asserts that the far-left and the far-right, rather than being at opposite and opposing ends of a linear political continuum, closely resemble one another, much like the ends of a horseshoe. The theory is attributed to French philosopher and writer Jean-Pierre Faye.[2] Proponents of the theory point to a number of similarities between the far-left and the far-right, including their supposed propensity to gravitate to authoritarianism or totalitarianism. Horseshoe theory has also received substantial criticism.[3][4][4][5]

Data Science problem

Can NLP give support to the horseshoe theory of politics?

To the extent that NLP is unable to distinguish between /progressive and /conservative sub Reddits, NLP cannot be used to support the horseshoe theory of politics.

If NLP is able to distinguish between these groups, then we can't accept the hypothesis that NLP supports the horseshoe theory.

Best confusion matrix

Model with lowest error scores:

Count Vectorizer / Logistic Regression

- Accuracy: 98.0%
- Misclassification rate: 2%
- Sensitivity: 98.1%
- Specificity: 97.8%
- Precision: 97.9%

	Predicted Negatives	Predicted Positives
Actual Negatives	587	13
Actual Positives	12	612

```
print(gs_cv_lr.score(X_train, y_train))
print(gs_cv_lr.score(X_test, y_test))
```

```
0.995370370370370
3
0.979575163398692
8
```