Multinomial Naive Bayes Classifier

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Multinomial naive Bayes works similar to Gaussian naive Bayes, however the features are assumed to be multinomially distributed. In practice, this means that this classifier is commonly used when we have discrete data (e.g. movie ratings ranging 1 and 5).

Preliminaries

```
# Load libraries
import numpy as np
from sklearn.naive_bayes import MultinomialNB
from sklearn.feature_extraction.text import CountVectorizer
```

Create Text Data

```
# Create text
text_data = np.array(['I love Brazil. Brazil!',
                      'Brazil is best',
                      'Germany beats both'])
```

Create Bag Of Words

```
# Create bag of words
count = CountVectorizer()
bag_of_words = count.fit_transform(text_data)

# Create feature matrix
X = bag_of_words.toarray()
```

Create Target Vector