sentiment-analysis

October 27, 2023

1 Tweet sentiment analysis

Francisco Javier Sanchez Panduro A01639832

Los datos se pueden encontrar aquí https://www.kaggle.com/competitions/tweet-sentiment-extraction/data

```python
[5]: import pandas as pd
     from sklearn.feature_extraction.text import TfidfVectorizer
     from sklearn.svm import LinearSVC
     from sklearn.pipeline import make_pipeline
     from sklearn.model_selection import cross_val_score
```

```python
[6]: train = pd.read_csv('train.csv')
     test = pd.read_csv('test.csv')
```

```python
[7]: train.dropna(inplace=True)
     test.dropna(inplace=True)
```

Crear modelo

```python
[12]: model = make_pipeline(TfidfVectorizer(), LinearSVC(dual=True))
```

Entrenar modelo

```python
[13]: X_train = train['text']
      y_train = train['sentiment']
      model.fit(X_train, y_train)
```

```
[13]: Pipeline(steps=[('tfidfvectorizer', TfidfVectorizer()),
                      ('linearsvc', LinearSVC(dual=True))])
```

Validar modelo

```python
[14]: scores = cross_val_score(model, X_train, y_train, cv=5)
      print("Precisión del modelo con validación cruzada: {:.2f}".format(scores.
       ↪mean()))
```

```
Precisión del modelo con validación cruzada: 0.68
```

Pronósticos

```
[15]:  X_test = test['text']
       predictions = model.predict(X_test)

       test['predicted_sentiment'] = predictions
       print(test[['text', 'predicted_sentiment']])
```

```
                                                    text predicted_sentiment
0         Last session of the day  http://twitpic.com/67ezh            neutral
1           Shanghai is also really exciting (precisely -...           positive
2         Recession hit Veronique Branquinho, she has to...           negative
3                                               happy bday!           positive
4                   http://twitpic.com/4w75p - I like it!!           positive
...                                                     ...                ...
3529      its at 3 am, im very tired but i can`t sleep  ...           negative
3530      All alone in this old house again.  Thanks for...            neutral
3531       I know what you mean. My little dog is sinkin...           negative
3532      _sutra what is your next youtube video gonna b...           positive
3533       http://twitpic.com/4woj2 - omgssh  ang cute n...           positive

[3534 rows x 2 columns]
```