

про внесення змін до договору про закупівлю
UA-2021-07-02-003444-с

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# Import the necessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')

# Load the dataset
url = "https://raw.githubusercontent.com/jbrown97/sentiment-analysis/master/data/train.csv"
data = pd.read_csv(url)

# Display the first few rows of the dataset
data.head()

# Check the data types of the columns
data.dtypes

# Remove the 'id' column as it is not needed for sentiment analysis
data = data.drop('id', axis=1)

# Split the data into training and testing sets
train_data, test_data = data.sample(frac=0.8, random_state=42).split()

# Convert the 'text' column to lowercase and remove punctuation
train_data['text'] = train_data['text'].str.lower().str.replace('[^\w\s]','', regex=True)
test_data['text'] = test_data['text'].str.lower().str.replace('[^\w\s]','', regex=True)

# Tokenize the text into words
train_data['tokens'] = train_data['text'].str.split()
test_data['tokens'] = test_data['text'].str.split()

# Create a bag of words (BoW) representation
vocab = Vocabulary.from_instances([train_data['tokens'], test_data['tokens']], min_count=3)

train_data['bow'] = train_data['tokens'].apply(lambda x: vocab.get_instances(x).A1)
test_data['bow'] = test_data['tokens'].apply(lambda x: vocab.get_instances(x).A1)

# Train a Naive Bayes classifier
from sklearn.naive_bayes import MultinomialNB
nb_classifier = MultinomialNB()
nb_classifier.fit(train_data['bow'], train_data['sentiment'])

# Evaluate the classifier on the test data
test_predictions = nb_classifier.predict(test_data['bow'])

# Calculate the accuracy of the classifier
accuracy = (test_predictions == test_data['sentiment']).sum() / len(test_data)
print("Accuracy: ", accuracy)

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