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Disciplina: Nível 4 – RPG0034 - Dando inteligência ao software

Semestre Letivo: Quinto Semestre

Dando Inteligência ao Software

Roteiro de prática

Procedimentos

1. **Instalando as bibliotecas necessárias**
    - Para realizar a análise de sentimento, é necessário instalar algumas bibliotecas Python no ambiente do Google Colab. As principais bibliotecas utilizadas são `spacy` e `spacytextblob`.

```
[3]  !pip install -U pip setuptools wheel
     !pip install -U spacy
     !python -m spacy download en_core_web_sm
     !pip install spacytextblob
```

2. **Importando as bibliotecas para análise de sentimento**
    - Após a instalação, importe as bibliotecas necessárias para análise de sentimento. Isso inclui `spacy` para processamento de linguagem natural e `spacytextblob` para análise de sentimentos.

```
import spacy
from spacytextblob.spacytextblob import SpacyTextBlob
```

3. **Definindo o modelo e a pipeline**
    - Carregue o modelo de processamento de linguagem natural (`en_core_web_sm` neste exemplo) e adicione a pipeline necessária para análise de sentimentos utilizando o `spacytextblob`.

```
nlp = spacy.load('en_core_web_sm')
nlp.add_pipe('spacytextblob')
```

4. **Definindo o texto inicial para validação**
    - Para verificar se a configuração está correta, defina um texto inicial e execute a análise de sentimento para verificar se os resultados estão de acordo com o esperado.

```
user_input = 'This is a wonderful campsite. I loved the serenity and the birds chirping in the morning.'
doc = nlp(user_input)
```

5. **Exibindo o resultado da primeira análise**

```
input_polarity = doc._.polarity
sentiment = {
    'score': input_polarity
}
print("Análise de Sentimento para o texto inicial:")
print(sentiment)
```

6. **Analisando os tweets**
    - Defina uma lista de tweets que serão analisados para determinar a percepção das pessoas sobre os clubes de futebol. Execute a análise de sentimento para cada tweet e exiba os resultados.

```
tweets = [
    "Bayer Leverkusen goalkeeper Bernd Leno will not be going to Napoli. His agent Uli Ferber to Bild: I can confirm that there were negotiations with Napoli, which we have b
    "Gary Speed v Blackburn at St James in 2001/02 anyone? #NUFC #BEL #JAP #WorldCup",
    "@ChelseaFC Don't make him regret it and start him over Hoofiz",
    "@LiverpoolFF @AnfieldEdition He's a liar, made up. I've unfollowed him as loads of others have. Pure blagger. #LFC",
    "@theesk @Everton Didn't realise Kenwright is due to leave at the end of the month. In all seriousness could you see him being interested in us?",
    "@hasanshahbaz19 @LFC My knowledge has decreased somewhat in the past few seasons",
    "Report: Linked with #Everton and #Wolves, Italians set to sign £4.5m-rated winger",
    "Am seeing tweets that there's been a fall out @Everton between the money men... I'm presuming it's just a quiet news day or some kopite with nothing better to do! @ALANM
    "@LFC @officialAL20 @IntChampionsCup @ManUtd Expect loads of excuses after tonight's game",
    "@MartinDiamond17 @azryahmad @Baren_D @Mathewlewis1997 @iamheinthu @DiMarzio @Alissonbecker @LFC @SkySportsNews @SkySport @OfficialASRoma I'm just fine I have your fanbas
    "What a weekend of football results! @ManUtd @Glentoran @RangersFC &amp;amp; Hearts ????",
    "@ChelseaFC For the first time in a long while, my heart was relaxed while watching Chelsea. Really enjoyed it today. Come on, CHELSEA!!!",
    "@ChelseaFC @CesarAzpi What a fantastic signing worth every single penny ??",
    "Pogba scores, Pogba assists. But tomorrow papers won't be telling you this, instead they will tell you how he'll end up at Juve because he's unhappy, frustrated, have gr
    "@WestHamUtd we need to keep @CH14_ and get @HirvingLozano70 to compliment",
    "@kevdev9 @Everton Shouldn't be happening! Needs to stay away with his venomous attitude until he is sold!",
    "@brfootball @aguerosergiokun @ManCity What a genius. Pep taking winning mentality with him, conquering league after league. Baller",
    "@HMZ0709 Can we get a RT for our #lfc Mo Salah Liverpool Enamel Pin Badge"
]
```

7. Analisando os tweets

```
print("\nAnálise de Sentimento para os tweets:")
for item in tweets:
    doc = nlp(item)
    input_polarity = doc._.polarity
    sentiment = {
        'tweet': item,
        'score': input_polarity
    }
    print(sentiment)
```