

Dando Inteligência ao Software

Instalando as bibliotecas e recarregando o ambiente:

```
+ Código + Texto

Este notebook executa uma análise de sentimentos para identificar a percepção do público sobre clubes de futebol ingleses, com base em textos retirados de redes sociais.

!pip install -U pip setuptools wheel
!pip install -U spacy==3.5.2
!python -m spacy download en_core_web_sm
!pip install spacytextblob==4.0.0

import pkg_resources, imp
imp.reload(pkg_resources)

Installing collected packages: en-core-web-sm
  Attempting uninstall: en-core-web-sm
    Found existing installation: en-core-web-sm 3.7.1
    Uninstalling en-core-web-sm-3.7.1:
      Successfully uninstalled en-core-web-sm-3.7.1
  Successfully installed en-core-web-sm-3.5.0
  Download and installation successful
You can now load the package via spacy.load('en_core_web_sm')
Collecting spacytextblob==4.0.0
  Downloading spacytextblob-4.0.0-py3-none-any.whl.metadata (5.1 kB)
Requirement already satisfied: spacy<4.0,>=3.0 in /usr/local/lib/python3.10/dist-packages (from spacytextblob==4.0.0) (3.5.2)
Collecting textblob<0.16.0,>=0.15.3 (from spacytextblob==4.0.0)
  Downloading textblob-0.15.3-py2.py3-none-any.whl.metadata (4.2 kB)
Requirement already satisfied: spacy-legacy<3.1.0,>=3.0.11 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (3.0.12)
Requirement already satisfied: spacy-loggers<2.0.0,>=1.0.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (1.0.5)
Requirement already satisfied: murmurhash<1.1.0,>=0.28.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (1.0.10)
Requirement already satisfied: cymem<2.1.0,>=2.0.2 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (2.0.8)
Requirement already satisfied: preshed<3.1.0,>=3.0.2 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (3.0.9)
Requirement already satisfied: thinc<8.2.0,>=8.1.8 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (8.1.12)
Requirement already satisfied: wasabi<1.2.0,>=0.9.1 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (1.1.3)
Requirement already satisfied: srsly<3.0.0,>=2.4.3 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (2.4.8)
Requirement already satisfied: catalogue<2.1.0,>=2.0.6 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (2.0.10)
Requirement already satisfied: typer<0.8.0,>=0.3.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (0.7.0)
Requirement already satisfied: pathy<0.10.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (0.11.0)
Requirement already satisfied: smart-open<7.0.0,>=5.2.1 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (6.4.0)
Requirement already satisfied: tqdm<5.0.0,>=4.38.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (4.66.6)
Requirement already satisfied: numpy<=1.15.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (1.26.4)
Requirement already satisfied: requests<3.0.0,>=2.13.0 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (2.32.3)
Requirement already satisfied: pydantic<1.8.1,>=1.8.1,<1.10.0,>=1.7.4 in /usr/local/lib/python3.10/dist-packages (from spacy<4.0,>=3.0->spacytextblob==4.0.0) (1.10.18)

✓ 33s conclusão: 21:20
```

Importando bibliotecas para análise de sentimento e definindo o modelo e a pipeline a serem utilizadas na análise:

```
Importando as bibliotecas para análise de sentimento

[2] import spacy
    from spacytextblob.spacytextblob import SpacyTextBlob

Definindo o modelo e a pipeline a serem utilizadas na análise

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

<spacytextblob.spacytextblob.SpacyTextBlob at 0x7e6873f6c370>
```

Definindo o texto inicial a ser analisado para verificação/validação da biblioteca e exibindo o resultado da primeira análise:

```
Definindo o texto inicial a ser analisado para verificação/validação da biblioteca

[4] user_input = "This is a wonderful campsite. I loved the serenity and the birds chirping in the morning."
    doc = nlp(user_input)

Exibindo o resultado da primeira análise (um range entre -1 [avaliação negativa] e 1 [avaliação positiva])texto do link

[5] input_polarity = doc._.polarity
    sentiment = {
        'score': input_polarity
    }

    print(sentiment)

{'score': 0.85}
```

Analizando Tweets:

```
sentiment.ipynb
Arquivo Editar Ver Inserir Ambiente de execução Ferramentas Ajuda

+ Código + Texto

Definindo a lista de tweets a serem analisadas

[6] tweets = [
    "Bayer Leverkusen goalkeeper Bernd Leno will not be going to Napoli...",
    "Gary Speed v Blackburn at St James in 2001/02 anyone?",
    "@ChelseaFC Don't make him regret it and start him over Hoofiz",
    "@LiverpoolFF @AnfieldEdition He's a liar, made up. I've unfollowed him...",
    "@theesk @Everton Didn't realise Kenwright is due to leave...",
    "@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...",
    "@LFC @officialAL20 @IntChampionsCup @ManUtd Expect loads of excuses after tonight's game",
    "Pogba scores, Pogba assists. But tomorrow papers won't be telling you this..."
]

Analizando os tweets

for item in tweets:
    doc = nlp(item)
    input_polarity = doc._.polarity
    sentiment = {
        'tweet': item,
        'score': input_polarity
    }
    print(sentiment)

{'tweet': 'Bayer Leverkusen goalkeeper Bernd Leno will not be going to Napoli...', 'score': 0.0}
{'tweet': 'Gary Speed v Blackburn at St James in 2001/02 anyone?', 'score': 0.0}
{'tweet': '@ChelseaFC Don't make him regret it and start him over Hoofiz', 'score': 0.0}
{'tweet': '@LiverpoolFF @AnfieldEdition He's a liar, made up. I've unfollowed him...', 'score': 0.0}
{'tweet': '@theesk @Everton Didn't realise Kenwright is due to leave...', 'score': -0.125}
{'tweet': '@hasanshahbaz19 @LFC My knowledge has decreased somewhat in the past few seasons', 'score': -0.28333333333333334}
{'tweet': 'Report: Linked with #Everton and #Wolves, Italians set to sign £4.5m-rated winger', 'score': 0.0}
{'tweet': 'Am seeing tweets that there's been a fall out @Everton...', 'score': 0.0}
{'tweet': '@LFC @officialAL20 @IntChampionsCup @ManUtd Expect loads of excuses after tonight's game', 'score': -0.4}
{'tweet': 'Pogba scores, Pogba assists. But tomorrow papers won't be telling you this...', 'score': 0.0}
```