

Missão Prática – Mundo 05 – Nível 04

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RPG0033 – DANDO INTELIGÊNCIA AO SOFTWARE – 9001 – 2025.1

<https://github.com/GilvanPOliveira/FullStack/tree/main/Mundo05/softwareInteligente>

Dando Inteligência ao Software

Contextualização

Recentemente a empresa em que você trabalha, como Analista de Data Science, foi contratada por uma grande empresa interessada em abrir, no Brasil, centros de treinamento esportivos vinculados a grandes clubes de futebol da Inglaterra. Nesse contexto, a empresa contratante deseja saber a percepção das pessoas em relação aos clubes citados, i.e., de uma forma geral, qual o sentimento delas, expressos através de textos publicados em redes sociais, sobre os mesmos.

Para essa atividade você deverá aplicar a Análise de Sentimentos, tarefa de Processamento de Linguagem Natural com uso de Machine Learning. Todo o passo-a-passo necessário para a atividade é descrito a seguir.

```
sentiment.ipynb ☆ ☁
Arquivo  Editar  Ver  Inserir  Ambiente de execução  Ferramentas  Ajuda
Comandos  + Código  + Texto  RAM  Disco
Análise de Sentimentos
• Passo 1: Instalando as bibliotecas e recarregando o ambiente;
[1] !pip install -U pip setuptools wheel
!pip install -U spacy
!python -m spacy download en_core_web_sm
!pip install spacytextblob
import pkg_resources, imp
imp.reload(pkg_resources)
Mostrar saída oculta
• Passo 2: Importando as bibliotecas para análise de sentimento;
[2] import spacy
from spacytextblob.spacytextblob import SpacyTextBlob
• Passo 3: Definindo o modelo e a pipeline a serem utilizadas na análise;
[3] nlp = spacy.load('en_core_web_sm')
nlp.add_pipe('spacytextblob')
<spacytextblob.spacytextblob.SpacyTextBlob at 0x7ceb5c1ca310>
```

OBS: Neste trecho teve de ser adicionado o blob, objeto de TextBlob, para poder acessar o atributo polarity para poder retornar o valor solicitado, entre -1 e 1 indicando a polaridade do texto.

- Passo 4: 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)
```

- Passo 5: Exibindo o resultado da primeira análise, um range entre -1 [avaliação negativa] e 1 [avaliação positiva];

```
[5] input_polarity = doc._.blob.polarity

sentiment = {'score': input_polarity}

print(sentiment)
```

```
{'score': 0.85}
```

- Passo 6: Definindo a lista de tweets a serem analisadas;

```
tweets=[
    "Bayer Leverkusen goalkeeper Bernd Leno will not be going to Napoli. His agent Uli Ferber to Bild: I can confirm tha",
    "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",
    "@hasanshabbaz19 @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 new",
    "@MartinDiamond17 @azryahmad @Baren_D @MathewLewis1997 @iamheinthu @DiMarzio @Alissonbecker @LFC @SkySportsNews @Sky",
    "What a weekend of football results! @ManUtd @Glentoran @RangersFC & Hearts ????",
    "@ChelseaFC For the first time in a long while, my heart was relaxed while watching Chelsea. Really enjoyed it today",
    "@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 en",
    "@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",
    "@HMZ0709 Can we get a RT for our #lfc Mo Salah Liverpool Enamel Pin Badge"
]
```

- Passo 7: Analisando os tweets;

```
[8] for item in tweets:

    doc = nlp(item)

    input_polarity = doc._.blob.polarity

    sentiment = {
        'tweet': item,
        'score': input_polarity
    }

    print(sentiment)
```

```
{'tweet': 'Bayer Leverkusen goalkeeper Bernd Leno will not be going to Napoli. His agent Uli Ferber to Bild: I can confirm that t', 'score': 0.0}
{'tweet': 'Gary Speed v Blackburn at St James in 2001/02 anyone? #NUFC #BEL #JAP #WorldCup', '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 as loads of others have. Pure blagger. #LFC', 'score': 0.0}
{'tweet': '@theesk @Everton Didn't realise Kenwright is due to leave at the end of the month. In all seriousness could you see hi', 'score': 0.0}
{'tweet': '@hasanshabbaz19 @LFC My knowledge has decreased somewhat in the past few seasons', 'score': -0.2833333333333334}
{'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 between the money men... I'm presuming it's just a quiet news c', 'score': -0.4}
{'tweet': '@MartinDiamond17 @azryahmad @Baren_D @MathewLewis1997 @iamheinthu @DiMarzio @Alissonbecker @LFC @SkySportsNews @SkySp', 'score': 0.0}
{'tweet': 'What a weekend of football results! @ManUtd @Glentoran @RangersFC & Hearts ????', 'score': 0.0}
{'tweet': '@ChelseaFC For the first time in a long while, my heart was relaxed while watching Chelsea. Really enjoyed it today. (', 'score': 0.20952380952380953}
{'tweet': '@ChelseaFC @CesarAzpi What a fantastic signing worth every single penny ??', 'score': 0.0}
{'tweet': 'Pogba scores, Pogba assists. But tomorrow papers won't be telling you this, instead they will tell you how he'll end u', 'score': 0.0}
{'tweet': '@WestHamUtd we need to keep @CH14_ and get @HirvingLozano70 to compliment', 'score': 0.0}
{'tweet': '@kevdev9 @Everton Shouldn't be happening! Needs to stay away with his venomous attitude until he is sold!', 'score': 0.0}
{'tweet': '@brfootball @aguerosergiokun @ManCity What a genius. Pep taking winning mentality with him, conquering league after 1c', 'score': 0.0}
{'tweet': '@HMZ0709 Can we get a RT for our #lfc Mo Salah Liverpool Enamel Pin Badge', 'score': 0.0}
```