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RPG0034 – Dando inteligência ao software

Objetivos da prática

- Configurar o ambiente Google Colab;
- Descrever tarefas diversas relacionadas ao Processamento de Linguagem Natural;
- Descrever o processo de identificação de entidades a partir de textos;
- Descrever o processo de extração de frases-chave a partir de textos;
- Descrever o processo de identificação de linguagem predominante a partir de textos.

sentiment.ipynb

Arquivo Editar Ver Inserir Ambiente de execução Ferramentas Ajuda Todas as alterações foram salvas

Código + Texto

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)
```

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 0x7da297573ac0>
```

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]

```
input_polarity = doc._.polarity

sentiment = {

    'score': input_polarity

}

print(sentiment)
```

Mostrar saída oculta

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 that there were negotiations with Napol

    "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

    "@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 y

    "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, frustrate

    "@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"]
```

Conectado ao dispositivo: de back-end do Google Compute Engine em Python 3

Passo 7: Analisando os tweets

```
[ ] for item in tweets:

        doc = nlp(item)

        input_polarity = doc._.polarity

        sentiment = {

            'tweet': item,

            'score': input_polarity

        }

        print(sentiment)
```