



Estácio

Missão Prática do Mundo 5 Nível 4

Disciplina: Dando Inteligência ao Software

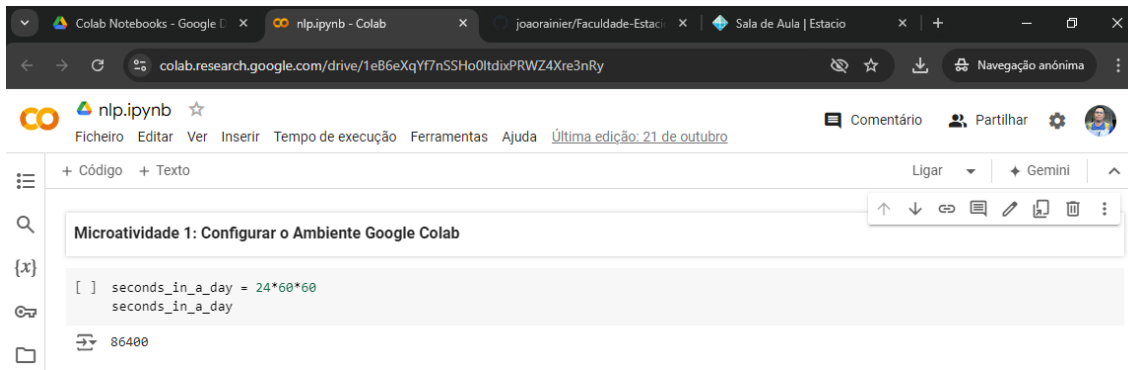
Aluno: João Rainier de Castro Carvalho

Matrícula: 202208942661

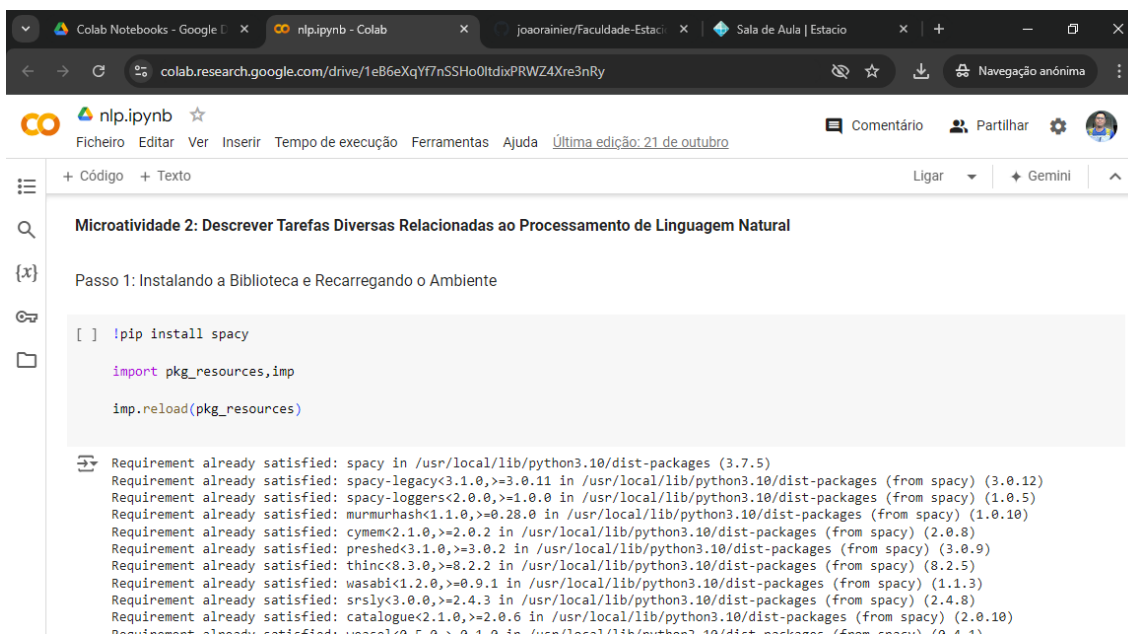
GitHub:

[https://github.com/joaorainier/Faculdade-
Estacio-5-
semestre/tree/main/N%C3%ADvel%204%
20-
%20Dando%20Intelig%C3%Aancia%20ao
%20Software](https://github.com/joaorainier/Faculdade-Estacio-5-
semestre/tree/main/N%C3%ADvel%204%
20-
%20Dando%20Intelig%C3%Aancia%20ao
%20Software)

Microatividade 1: Configurar o Ambiente Google Colab



Microatividade 2: Descrever Tarefas Diversas Relacionadas ao Processamento de Linguagem Natural



Microatividade 3: Descrever o Processo de Identificação de Entidades a Partir de Textos

The screenshot shows a Google Colab notebook interface. The browser tabs at the top include 'Colab Notebooks - Google', 'ner.ipynb - Colab', 'joaorainier/Faculdade-Estaci...', and 'Sala de Aula | Estacio'. The address bar shows the URL 'colab.research.google.com/drive/1N4wOcNpXi8MrU-tca6fY8ziKkBNaeVMd'. The notebook title is 'ner.ipynb' and it shows the last edit as '21 de outubro'. The notebook content is divided into two sections: 'Passo 1: Importando as Bibliotecas Python e Configurando o Modelo a Ser Utilizado Pelo Spacy' and 'Passo 2: Definição do Texto a Ser Analisado e Exibição das Entidades Encontradas'. The code for Passo 1 imports pandas, spacy, requests, BeautifulSoup, and loads the 'en_core_web_sm' model. The code for Passo 2 processes a sample text about Apple and prints the identified entities.

```
[ ] import pandas as pd

import spacy

import requests

from bs4 import BeautifulSoup

nlp = spacy.load("en_core_web_sm")

pd.set_option("display.max_rows", 200)
```

Passo 2: Definição do Texto a Ser Analisado e Exibição das Entidades Encontradas

```
[ ] doc = nlp("Apple is looking at buying U.K. startup for $1 billion")

for ent in doc.ents:

    print(ent.text, ent.start_char, ent.end_char, ent.label_)
```

Apple 0 5 ORG
U.K. 27 31 GPE
\$1 billion 44 54 MONEY

Microatividade 4: Descrever o Processo de Extração de Frases-Chaves a Partir de Textos

The screenshot shows a Google Colab notebook interface. The browser tabs at the top include 'Colab Notebooks - Google', 'kpe.ipynb - Colab', 'joaorainier/Faculdade-Estaci...', and 'Sala de Aula | Estacio'. The address bar shows the URL 'colab.research.google.com/drive/1WU5L5dAzErrZ1woF_qQArzLS8_T2zRf'. The notebook title is 'kpe.ipynb' and it shows the last edit as '21 de outubro'. The notebook content is divided into two sections: 'Passo 1: Extração de Frases-Chave a Partir de Textos' and 'Passo 1.1: Instalação das Bibliotecas'. The code for Passo 1.1 installs the 'pke' library from GitHub, downloads the 'en_core_web_sm' model, and imports the necessary modules. The output shows the installation process and the requirements for the 'pke' library.

```
[ ] !pip install git+https://github.com/boudinfl/pke.git

!python -m spacy download en_core_web_sm

import pkg_resources, imp

imp.reload(pkg_resources)
```

Collecting git+https://github.com/boudinfl/pke.git
Cloning https://github.com/boudinfl/pke.git to /tmp/pip-req-build-51tby6n1
Running command git clone --filter=blob:none --quiet https://github.com/boudinfl/pke.git /tmp/pip-req-build-51tby6n1
Resolved https://github.com/boudinfl/pke.git to commit 69871ffdb720b83df23684fea53ec8776fd87e63
Preparing metadata (setup.py) ... done
Requirement already satisfied: nltk in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (3.8.1)
Requirement already satisfied: networkx in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (3.4.1)
Requirement already satisfied: numpy in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (1.26.4)
Requirement already satisfied: scipy in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (1.13.1)
Requirement already satisfied: scikit-learn in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (1.5.2)
Collecting unicodecode (from pke==2.0.0)
Downloading Unidecode-1.3.8-py3-none-any.whl.metadata (13 kB)
Requirement already satisfied: future in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (1.0.0)
Requirement already satisfied: joblib in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (1.4.2)
Requirement already satisfied: snarv>=3.2.3 in /usr/local/lib/python3.10/dist-packages (from pke==2.0.0) (3.7.5)

Microatividade 5: Descrever o Processo de Identificação de Linguagem Predominante a Partir de Textos

The screenshot shows a Google Colab notebook interface. The browser tabs at the top include 'Colab Notebooks - Google', 'lang.ipynb - Colab', 'joaorainier/Faculdade-Estaci', and 'Sala de Aula | Estacio'. The address bar shows the URL 'colab.research.google.com/drive/1vQ57HPW88-15LR1WPHCBh8Wxsn1gUEMa'. The notebook title is 'Microatividade 5: Descrever o Processo de Identificação de Linguagem Predominante a Partir de Textos'. The interface includes a menu bar with options like 'Ficheiro', 'Editar', 'Ver', 'Inserir', 'Tempo de execução', 'Ferramentas', 'Ajuda', and 'Última edição: 21 de outubro'. The notebook content is divided into two sections: 'Passo 1: Identificação de Idioma Predominante em Textos' and 'Passo 1.1: Instalação das Bibliotecas'. The code cell for 'Passo 1.1' contains the command to install 'langdetect' using pip. The output shows the successful installation of 'langdetect-1.0.9'. The second section, 'Passo 2: Definindo as Frases em Diferentes Idiomas que Serão Analisadas', contains a code cell with two text strings in English and Hungarian.

```
[ ] !pip install langdetect
```

Collecting langdetect
Downloading langdetect-1.0.9.tar.gz (981 kB)
981.5/981.5 kB 9.4 MB/s eta 0:00:00
Preparing metadata (setup.py) ... done
Requirement already satisfied: six in /usr/local/lib/python3.10/dist-packages (from langdetect) (1.16.0)
Building wheels for collected packages: langdetect
Building wheel for langdetect (setup.py) ... done
Created wheel for langdetect: filename=langdetect-1.0.9-py3-none-any.whl size=993222 sha256=012d4df8db9b59358a1b888bf2d6c7d4013d00c
Stored in directory: /root/.cache/pip/wheels/95/03/7d/59ea870c70ce4e5a370638b5462a7711ab78fba2f655d05106
Successfully built langdetect
Installing collected packages: langdetect
Successfully installed langdetect-1.0.9

```
[ ] text = ["Wear masks, keep distance, wash hands, be safe in these difficult days.",  
           "Viseljén maszkot, tartson távolságot, mosson kezet, legyen biztonságbaneezekben a nehéz napokban",
```

Missão Prática Mundo 5 Nível 4 – Dando Inteligência ao Software

The screenshot shows a Google Colab notebook interface. The browser tabs at the top include 'Colab Notebooks - Google', 'sentiment.ipynb - Colab', 'joaorainier/Faculdade-Estaci', and 'Sala de Aula | Estacio'. The address bar shows the URL 'colab.research.google.com/drive/1PDOn7phMZ896TLH09TDDfQu3P-6848E'. The notebook title is 'Missão Prática Mundo 5 Nível 4 - Dando Inteligência ao Software'. The interface includes a menu bar with options like 'Ficheiro', 'Editar', 'Ver', 'Inserir', 'Tempo de execução', 'Ferramentas', 'Ajuda', and 'Última edição: 22 de outubro'. The notebook content is divided into two sections: 'Passo 1: Instalando as Bibliotecas e Recarregando o Ambiente'. The code cell contains commands to install 'pip', 'setuptools', 'wheel', 'spacy', and 'spacytextblob', and to reload the 'pkg_resources' module. The output shows the successful installation of 'pip-24.2-py3-none-any.whl', 'setuptools-75.2.0-py3-none-any.whl', and 'wheel-0.44.0'. The second section, 'Passo 2: Definindo as Frases em Diferentes Idiomas que Serão Analisadas', contains a code cell with two text strings in English and Hungarian.

```
[ ] !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)
```

Requirement already satisfied: pip in /usr/local/lib/python3.10/dist-packages (24.1.2)
Collecting pip
Downloading pip-24.2-py3-none-any.whl.metadata (3.6 kB)
Requirement already satisfied: setuptools in /usr/local/lib/python3.10/dist-packages (75.1.0)
Collecting setuptools
Downloading setuptools-75.2.0-py3-none-any.whl.metadata (6.9 kB)
Requirement already satisfied: wheel in /usr/local/lib/python3.10/dist-packages (0.44.0)
Downloading pip-24.2-py3-none-any.whl (1.8 MB)
1.8/1.8 MB 17.7 MB/s eta 0:00:00
Downloading setuptools-75.2.0-py3-none-any.whl (1.2 MB)
1.2/1.2 MB 26.9 MB/s eta 0:00:00
Installing collected packages: setuptools, pip
Attempting uninstall: setuptools
Found existing installation: setuptools 75.1.0