

Web Semântica e Processamento de Linguagem Natural na prática

Newton Calegari



PUC-SP

Google Natural Language API

Tarefas NLP

Análise de sentimento

Reconhecimento de entidades em texto

Exercícios

Processamento de Linguagem Natural

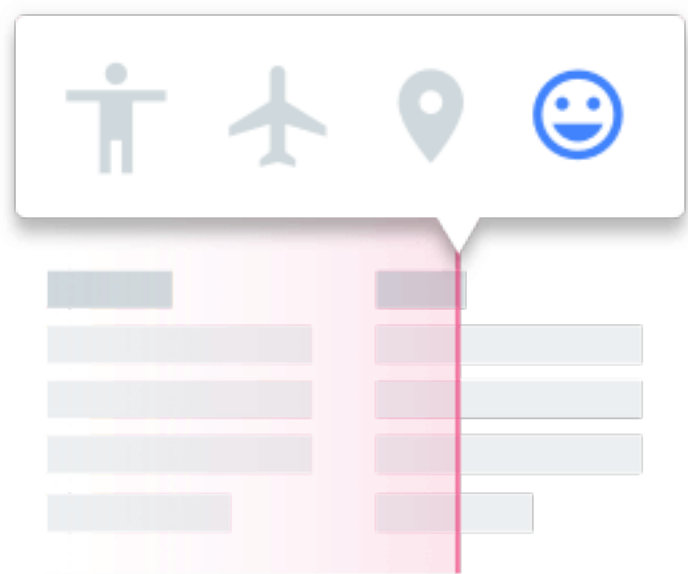
Natural Language Processing

Google Cloud Platform



Google Cloud Platform

Natural Language API



Powerful Text
Analysis



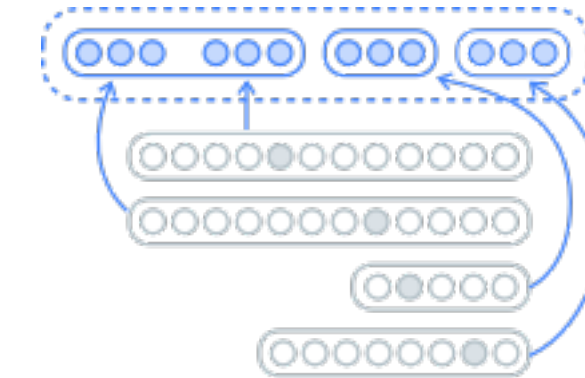
Multi-lingual
support



Insights from
customers



Relationships
Graphs

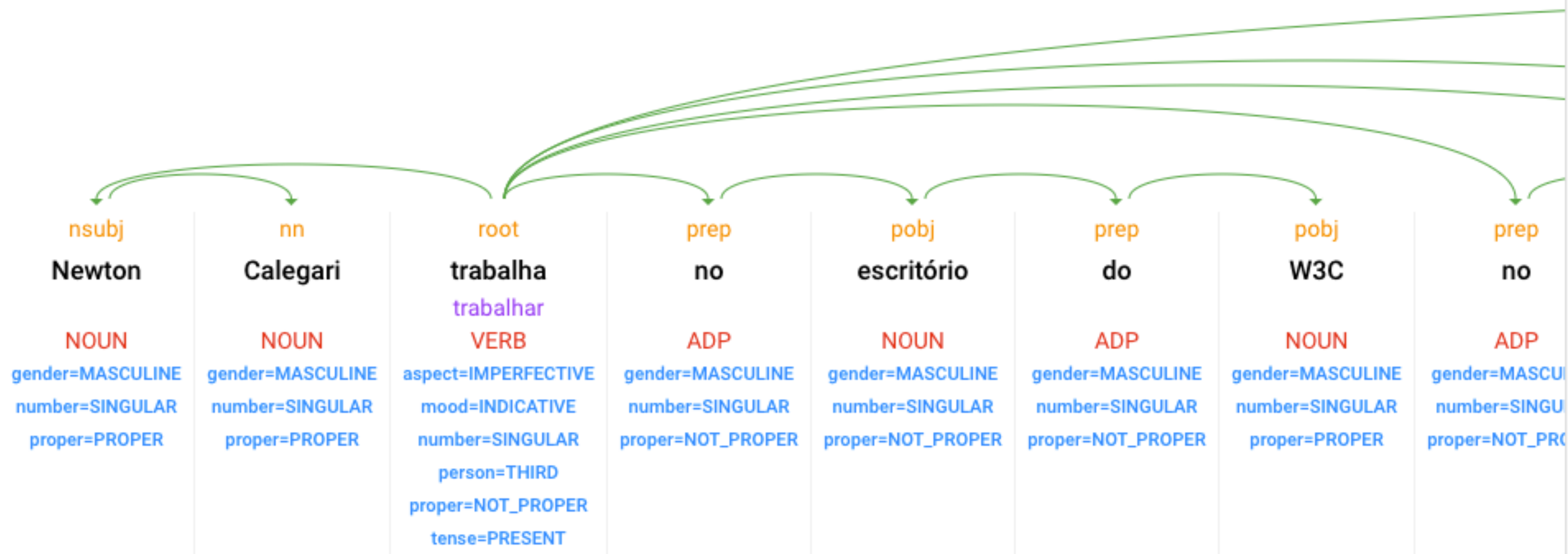


Deep Learning
models

Análise sintática

Extração de “tokens” e sentenças, identificação de partes do discurso (PoS) e geração de árvore de dependência para cada sentença.

✓ Dependency ✓ Parse Label ✓ Part of Speech ✓ Lemma ✓ Morphology



Reconhecimento de entidades

Identificação de entidades em texto rotulando por tipos, como pessoa, organização, localização, evento, produto.

⟨**Newton Calegari**⟩₁ trabalha no ⟨**escritório**⟩₃ do ⟨**W3C**⟩₄ no ⟨**Brasil**⟩₅ e é ⟨**professor**⟩₂ no ⟨**curso**⟩₇ de ⟨**Web Semântica**⟩₈ da ⟨**PUC-SP**⟩₆.

1. **Newton Calegari**

[Wikipedia Article](#)

Salience: 0.28

PERSON

2. **professor**

Salience: 0.16

PERSON

3. **escritório**

[Wikipedia Article](#)

Salience: 0.15

LOCATION

4. **W3C**

[Wikipedia Article](#)

Salience: 0.10

ORGANIZATION

5. **Brasil**

[Wikipedia Article](#)

Salience: 0.10

LOCATION

6. **PUC-SP**

[Wikipedia Article](#)

Salience: 0.09

ORGANIZATION

7. **curso**

[Wikipedia Article](#)

Salience: 0.07

OTHER

8. **Web Semântica**

[Wikipedia Article](#)

Salience: 0.06

OTHER

Análise de sentimento

Entendimento do sentimento geral presente em um bloco de texto.

Document & Sentence Level Sentiment

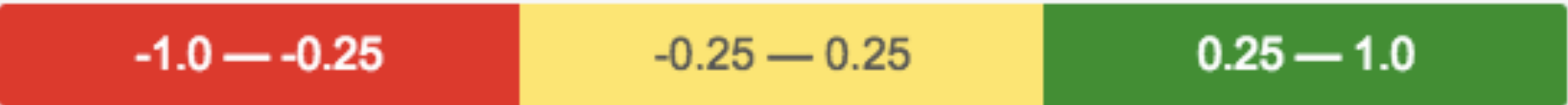
Entire Document

Score	Magnitude
0.7	0.7

Eu gosto muito de ir de bicicleta para o trabalho

0.7	0.7
-----	-----

Score Range



Cloud Natural Language API

Secure <https://cloud.google.com/natural-language/>

Google Cloud Platform

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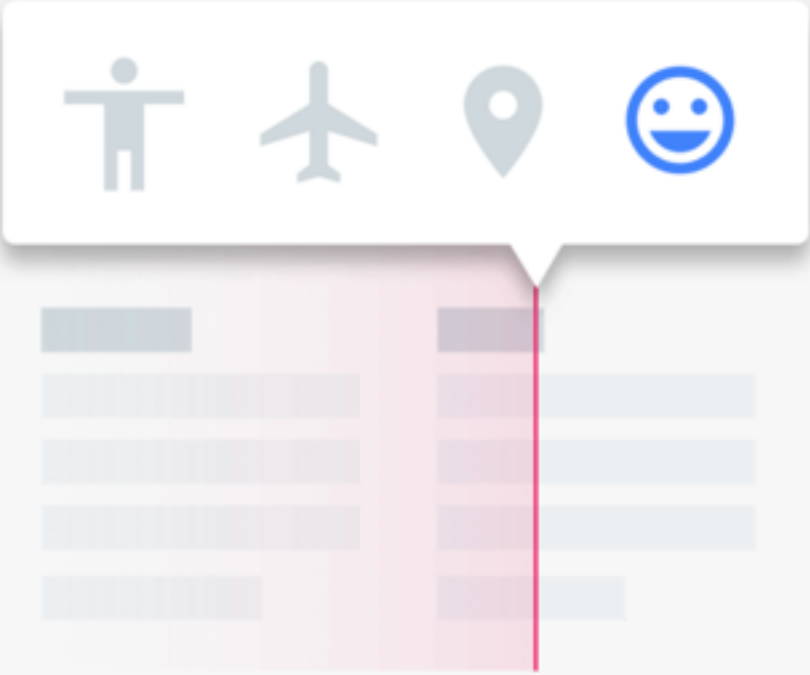
CLOUD NATURAL LANGUAGE API

Derive insights from unstructured text using Google machine learning

[VIEW DOCUMENTATION](#) [VIEW CONSOLE](#)

Powerful Text Analysis

Google Cloud Natural Language API reveals the structure and meaning of text by offering powerful machine learning models in an easy to use REST API. You can use it to **extract information** about people, places, events and much more, mentioned in text documents, news articles or blog posts. You can use it to **understand sentiment** about your product on social media or **parse intent** from customer conversations happening in a call center or a messaging app. You can **analyze text uploaded in your request** or integrate with your document storage on Google Cloud Storage.



cloud.google.com/natural-language

Setup Google Cloud API

Instalação do Cloud SDK:

<https://cloud.google.com/sdk/docs/quickstarts>


```
gcloud init
```

Instalação da biblioteca gcloud para Python:

```
pip install --upgrade google-cloud-language
```

Definir variável de ambiente:

```
export GOOGLE_APPLICATION_CREDENTIALS=/path/to/chave.json
```

Google Cloud Natural Language API

Securehttps://cloud.google.com/natural-language/docs/

Google Cloud Platform

Why GoogleProductsSolutionsLauncherPricingCustomersDocumentationSupportPartners

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Profile

Natural Language API

Product Overview

Documentation

Quickstart

How-to Guides

All How-to Guides

Authenticating to the API

Analyzing Sentiment

Analyzing Entities

Analyzing Syntax

New Features (Beta)

APIs & Reference

All APIs & References

Client Libraries

REST Reference

RPC Reference

Command-Line Reference

Language Support

Concepts

Natural Language Basics

Morphology & Dependency Trees

Google Cloud Natural Language API

★★★★★

SEND FEEDBACK

Google Cloud Natural Language API Documentation

The Google Cloud Natural Language API provides natural language understanding technologies to developers, including sentiment analysis, entity analysis, and syntax analysis. This API is part of the larger Cloud Machine Learning API family.

For information on which languages are supported by the Natural Language API, see [Language Support](#).

Quickstart

Learn in 5 minutes

How-to Guides

Perform specific tasks

APIs & Reference

REST and RPC API Reference

Concepts

Develop a deep understanding of Natural Language API

Samples & Tutorials

Walkthroughs and sample applications

Resources

Pricing, quotas, release notes, and other resources