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Top

Top 10 Named Entity Recognition (NER) API

This article is brought to you by the Eden AI team. We allow you to test and use in production a large number of AI engines from different providers directly through our API and platform. If you are a NER engine provider and want to integrate Eden AI, contact us at: contact@edenai.co

In this article, we are going to see how we can easily integrate a Named Entity Recognition (NER) engine in your project and how to choose and access the right engine according to your data.

Definition:

In Natural Language Processing (NLP), Named Entity Recognition (NER) is a process where a sentence or a chunk of text is parsed through to find entities that can be put under categories like names, organizations, locations, quantities, monetary values, percentages, etc. With named entity recognition, you can extract key information to understand what a text is about, or merely use it to collect important information to store in a database.

History:

The term "Named Entity (NE)" was born in the Message Understanding Conferences (MUC) which influenced IE research in the U.S. in the 1990's. At that time, MUC focused on Information Extraction tasks where structured information of company activities and defense related activities is extracted from unstructured text, such as newspaper articles. Outside the U.S., there have been several evaluation-based projects for NE. Around this time, the number of categories is limited to 7 to 10, and

the NE taggers, automatic annotation systems for NE entities in unstructured text,
are based on dictionaries and rules which were made by hand or some supervised

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Top 10 Named Entities Recognition API:

Microsoft Azure - *Available on Eden AI*

The Text Analytics API is a cloud-based service that provides advanced natural
language processing over raw text, and includes four main functions: sentiment
analysis, key phrase extraction, named entity recognition, and language detection.

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ParallelDots

Text Analysis APIs

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more than a billion documents and provide state-of-the-art accuracy on most common NLP use-cases such as sentiment analysis and emotion detection.

Start Free   Contact Us

ParallelDots provides Komprehend AI APIs that are a comprehensive set of document classification and NLP APIs for software developers. Their NLP models are trained on more than a billion documents and provide state-of-the-art accuracy on most common NLP use-cases such as named entity recognition, sentiment analysis and emotion detection.

Google Cloud - *Available on Eden AI*

Natural Language AI

Benefits

Demo

Key features

Our customers

Documentation

All features

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Take the next step

Natural Language AI

Derive insights from unstructured text using Google machine learning.

Get started

✓ Get insightful text analysis with machine learning that extracts, analyzes, and stores text

✓ Train high-quality machine learning custom models without a single line of code with AutoML

✓ Apply natural language understanding (NLU) to apps with Natural Language API

The Cloud Natural Language API provides natural language understanding technologies to developers, including sentiment analysis, entity analysis, entity sentiment analysis, content classification, and syntax analysis. This API is part of the larger Cloud Machine Learning API family. Each API call also detects and returns the language, if a language is not specified by the caller in the initial request.

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Extract Meaning from your Text.

The TextRazor API helps you extract and understand the Who, What, Why and How from your emails with unprecedented accuracy and speed.

Free API Key   Try The Demo

TextRazor offers a complete cloud or self-hosted text analysis infrastructure. They combine state-of-the-art natural language processing techniques with a comprehensive knowledgebase of real-life facts to help rapidly extract the value from your documents, tweets or web pages. They provide features such as entity extraction, disambiguation and linking, keyphrase extraction, automatic topic tagging and classification.

AWS - *Available on Eden AI*

Amazon Comprehend

Extraire et comprendre des informations précieuses à partir du texte des documents

Démarrer avec Amazon Comprehend   Contacter le service commercial

Comprenez la signification du texte et obtenez des informations précieuses à partir des tickets d'assistance des clients, des évaluations de produit, des flux des réseaux sociaux,

Améliorez vos capacités à étiqueter et organiser les documents par rubrique grâce aux étiquettes et aux titres personnalisés.

Entraînez facilement les modèles pour identifier des termes spécifiques en utilisant vos propres données, sans avoir besoin d'expérience en machine learning.

Déterminez comment les termes spécifiques à l'industrie sont liés les uns aux autres, et améliorez les informations extraites des documents texte comme les e-mails et les
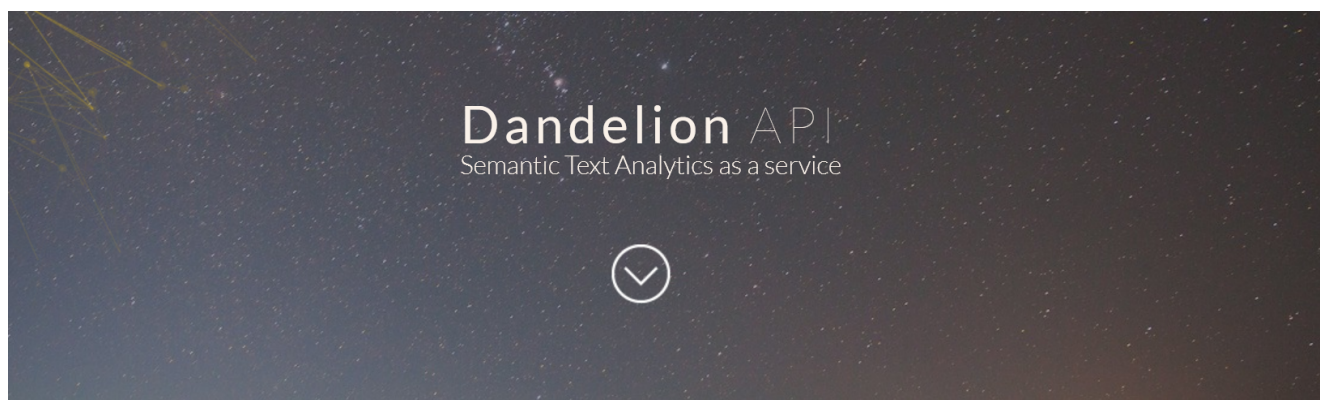
Amazon Comprehend uses natural language processing (NLP) to extract insights about the content of documents. Amazon Comprehend processes any text file in

UTF-8 format, and semi-structured documents, like PDF and Word documents. It
develops insights by recognizing the entities, key phrases, language, sentiments, and

Available on Eden AI

Dandelion

Dandelion API is a set of semantic APIs to extract meaning and insights from texts in
several languages (Italian, English, French, German and Portuguese). It's optimized to
perform text mining and text analytics for short texts, such as tweets and other
social media. Dandelion API extracts entities (such as persons, places and events),
categorizes and classifies documents in user-defined categories, augments the text
with tags and links to external knowledge graphs and more.

IBM *- Available on Eden AI*

Watson Natural

The natural language processing
(NLP) service for advanced text
analytics

IBM Natural Language Understanding is a collection of APIs that offer text analysis
through natural language processing. This set of APIs can analyze text to help you
understand its concepts, entities, keywords, sentiment, and more. Additionally, you
can create a custom model for some APIs to get specific results that are tailored to
your domain.

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MonkeyLearn

MonkeyLearn API
Bring fast and powerful
Text Analysis into your
apps

Integrate fast and powerful Text Analysis into your Apps.
From topic classification to sentiment analysis and entity
extraction. Do it in a matter of days, not months!

MonkeyLearn is a Text Analysis platform with Machine Learning to automate
business workflows and save hours of manual data processing. They provide pre-
built NLP APIs adapted to use cases such as entity extraction, sentiment analysis,
text classification, etc. With MonkeyLearn you can also train custom machine
learning models to get topic, sentiment, intent, keywords and more.

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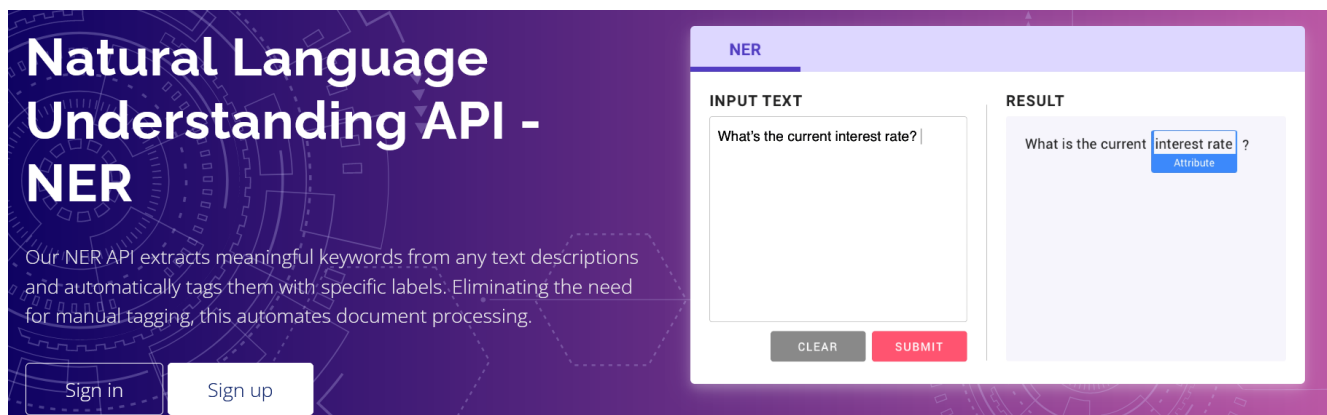
Find key themes and trending topics using Repustate's Named Entity Recognition

Easily identify over 7 million people, brands, businesses, products and locations.

Repustate is a leading provider of text analytics services for enterprise companies. Sentiment analysis and semantic analysis in multiple languages using machine learning. Extract named entities (athletes, politicians, entertainers, countries, cities, landmarks, you name it) from any piece of text. Analyze text for opinions and sentiment in one of English, French, Spanish, German, Italian, Arabic or Chinese. All delivered over a very simple to use API.

Allganize

Natural Language Understanding API - NER

Our NER API extracts meaningful keywords from any text descriptions and automatically tags them with specific labels. Eliminating the need for manual tagging, this automates document processing.

Sign in   Sign up

NER

INPUT TEXT

What's the current interest rate?

RESULT

What is the current interest rate ?
Attribute

CLEAR   SUBMIT

Allganize provides Natural Language Understanding API and conversational AI for enterprises. It also helps businesses automate workflows by natural language understanding AI. It provides insight into what your teammates are working on, as well as overarching work patterns/trends in your team. Allganize leverages deep learning-based, high-performance NLU technology to enable companies of all sizes to apply AI technology to develop their own AI systems and services. The company provides real-time customer and project related information.

Industrial-Strength Natural Language Processing

IN PYTHON

spaCy is an open-source software library for advanced natural language processing, written in the programming languages Python and Cython. spaCy comes with pretrained pipelines and currently supports tokenization and training for 60+ languages. It features state-of-the-art speed and neural network models for tagging, parsing, named entity recognition, text classification and more, multi-task learning with pre-trained transformers like BERT, as well as a production-ready training system and easy model packaging, deployment and workflow management. spaCy is commercial open-source software, released under the MIT license.

Use cases:

You can use Named Entity Recognition in numerous fields, here are some examples of common use cases:

- Healthcare: Improve patient care standards and reduce workloads by extracting essential information from lab reports

- Human resources: Speed up the hiring process by summarizing applicants' CVs; improve internal workflows by categorizing employee complaints and questions

- Customer support: Improve response times by categorizing user requests, complaints and questions and filtering by priority keywords

Open source VS API

When you need a NER engine, you have 2 options:

- First option: multiple open source NER engines exist, they are free to use. Some of them can be performant but it can be complex to set up and use. Using an open source AI library requires data science expertise. Moreover, you will need to set up a server internally to run open source engines.

- Second option: you can use engines from your cloud provider. Actually, cloud providers like Google Cloud, AWS, Microsoft Azure, Alibaba Cloud or IBM Watson are all providing multiple AI engines including NER. This option looks very easy because you can stay in a known environment where you might have abilities in your company and the engine is ready-to-use.

The only way you have to select the right provider is to benchmark different providers' engines with your data and choose the best OR combine different providers' engines results. You can also compare prices if the price is one of your priorities, as well as you can do for rapidity.

This method is the best in terms of performance and optimization but it presents many inconveniences:

- you may not know every performant providers on the market

- you need to subscribe and contract with all providers

- you need to master each providers API documentation

- you need to check their pricings

- You need to process data in each engine to realize the benchmark

Here is where Eden AI becomes very useful. You just have to subscribe and create an Eden AI account, and you have access to many providers engines for many technologies including NER. The platform allows you to benchmark and visualize results from different engines, and also allows you to have centralized cost for the use of different providers.

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simple parameter. With only a few lines, you can set up your project in production...

Which Named Entity Recognition (NER...

▶

Test and API:

Here is the code in Python (GitHub repo) that allows to test Eden AI for Named Entity Recognition:

```
# pip install edenai
```

```
result = text_apis.ner(
    text="Musk was born to a Canadian mother and South African father
and raised in Pretoria, South Africa. He briefly attended the
University of Pretoria before moving to Canada aged 17 to attend
Queen's University. ",
    providers=["google", "microsoft","amazon", "ibm"],
    language="en-US")

print(result)
```

Answer:

```
{'Google Cloud': (['Musk', 'mother', 'father', 'Canadian', 'South
African', 'Pretoria', 'University of Pretoria', "Queen's University",
'17'], [0.47810444, 0.11348512, 0.07804579, 0.06872962, 0.06872962,
0.0532162, 0.04970709, 0.026526792, 0]), 'Microsoft Azure': (['Musk',
'Canadian', 'mother', 'South African', 'father', 'Pretoria', 'South
Africa', 'University of Pretoria', 'Canada', '17', "Queen's
University"], [1.0, 0.93, 0.5, 0.88, 0.66, 1.0, 0.77, 0.96, 1.0, 0.8,
0.97]), 'Amazon Web Services': (['Musk', 'Canadian', 'South',
'African', 'Pretoria, South Africa', 'University of Pretoria',
'Canada', 'aged 17', "Queen's University"], [0.9975027441978455,
0.9664163589477539, 0.584948718547821, 0.5038328170776367,
0.9892488718032837, 0.8733880519866943, 0.9978818297386169,
0.915043294429779, 0.9809027314186096]), 'IBM Watson': (['University of
Pretoria', 'Pretoria', 'South Africa', 'Musk', "Queen's University",
'Canada'], [0.891978, 0.784815, 0.622498, 0.536464, 0.522522,
0.289572]), 'Genius': (['Musk', 'mother', 'father', 'Canadian', 'South
African', 'Pretoria', 'University of Pretoria', "Queen's University",
'17', 'South Africa', 'Canada', 'South', 'African', 'Pretoria, South
Africa', 'aged 17'], [1.0, 0.5, 0.66, 0.9664163589477539, 0.88, 1.0,
0.96, 0.9809027314186096, 0.8, 0.77, 1.0, 0.584948718547821,
0.5038328170776367, 0.9892488718032837, 0.915043294429779])}
```

Platform:

Eden AI also allows you to compare these engines directly on the web interface without having to code:
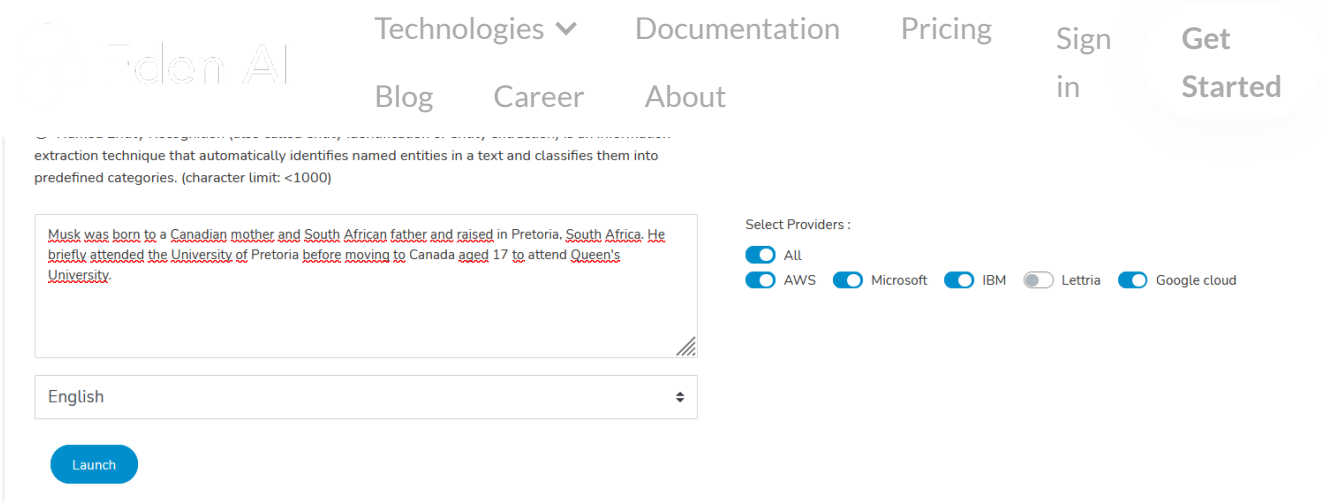
Eden AI Platform : Named Entity Recognition
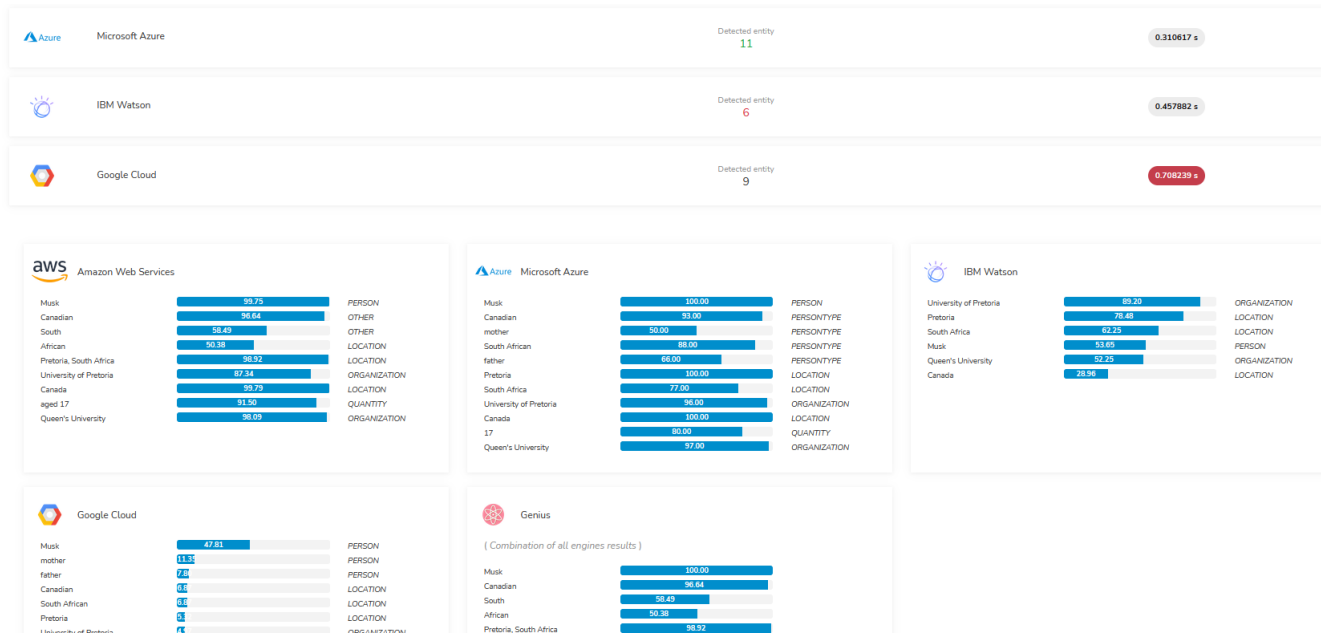
Eden AI Platform : Named Entity Recognition response

Conclusion:

There are numerous NER engines available on the market: it's impossible to know all of them, to know those who provide good performance. The best way you have to integrate NER technology is the multi-cloud approach that guarantees you to reach the best performance and prices depending on your data and project. This approach

seems to be complex but we simplify this for you with Eden AI which centralizes best providers APIs

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                                   Policy