

MAJOR PROJECT

SENTIMENTAL ANALYSIS FOR TEXT ANALYTICS

PROCEDURE:

In AWS (Amazon Web Services), you can perform sentiment analysis using services such as Amazon Comprehend. Gather the text data that you want to analyze and ensure it is in a suitable format, such as a text file. Upload your text data to an appropriate storage service in AWS, such as Amazon S3 (Simple Storage Service). This will provide a secure and scalable storage solution for your data. Preprocess your text data to remove noise, irrelevant information, or any specific elements that may affect sentiment analysis. This can include steps like removing special characters, punctuation, stopwords, and converting the text to lowercase.

The screenshot shows the AWS website homepage. At the top, there is a navigation bar with the AWS logo, links for Products, Solutions, Pricing, Documentation, Learn, Partner Network, AWS Marketplace, Customer Enablement, Events, and Explore More. On the right, there are links for Contact Us, Support, English, My Account, and a Sign In to the Console button. The main banner features the text 'Build with Generative AI on AWS' with a subtext 'Innovate faster to reinvent customer experiences and applications' and a 'Learn more' link. To the right of the text is a graphic of a circuit board. Below the banner, there are four service highlights: 1. Amazon Lightsail Extended Free Tier, 2. AWS is a Leader in the Gartner Magic Quadrant, 3. Start Building with Analytics for Free, and 4. Caching as a Best Practice for Microservices-based Apps.

aws

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Products Solutions Pricing Documentation Learn Partner Network AWS Marketplace Customer Enablement Events Explore More

Build with Generative AI on AWS

Innovate faster to reinvent customer experiences and applications

[Learn more »](#)

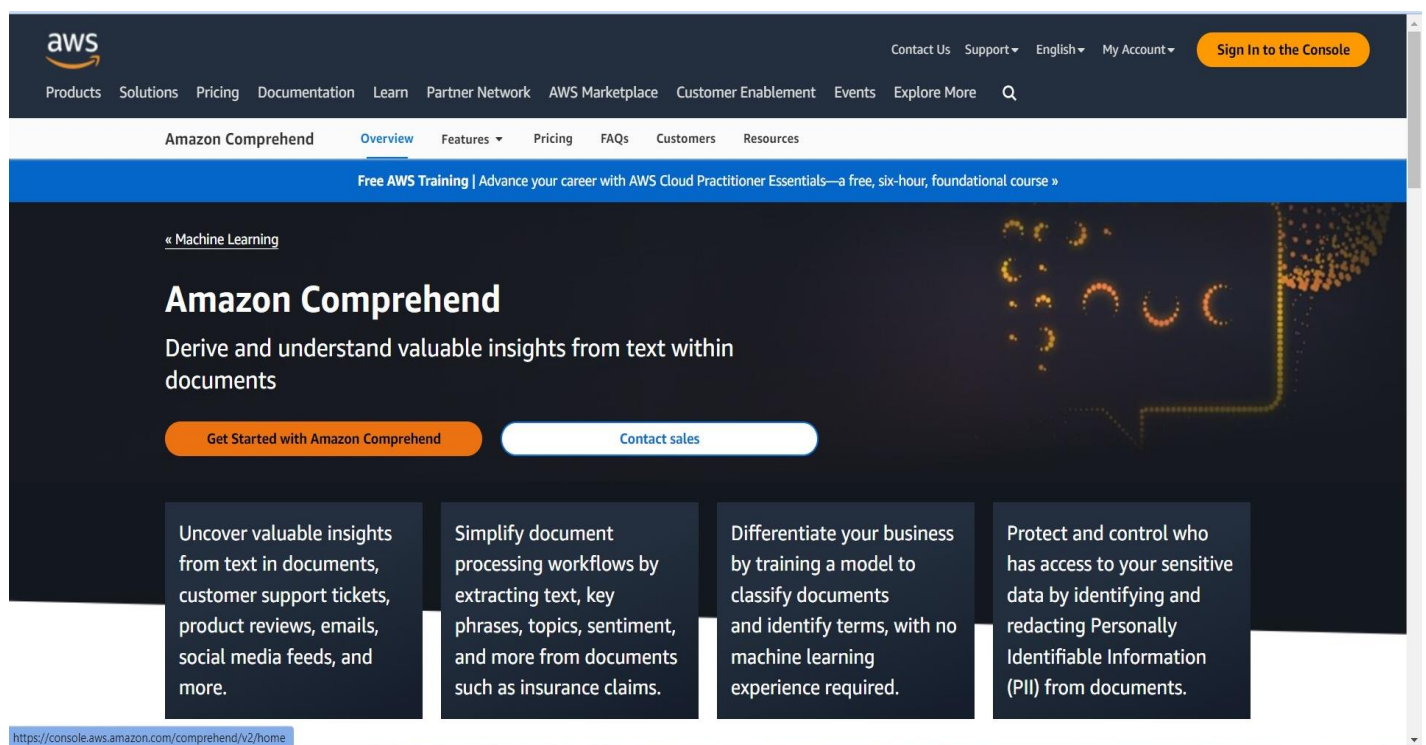
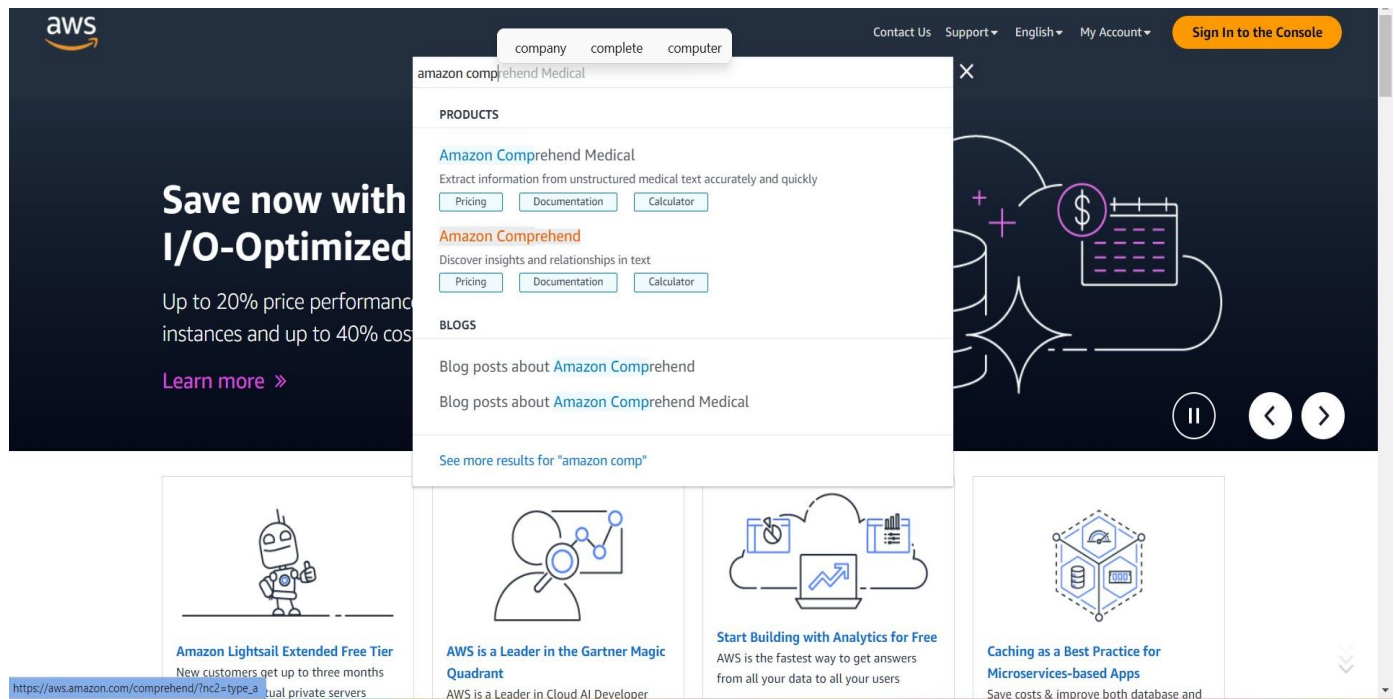
Amazon Lightsail Extended Free Tier
New customers get up to three months of free usage on Amazon Lightsail virtual private servers

AWS is a Leader in the Gartner Magic Quadrant
AWS is a Leader in Cloud AI Developer

Start Building with Analytics for Free
AWS is the fastest way to get answers from all your data to all your users

Caching as a Best Practice for Microservices-based Apps
Save costs & improve both database and application performance

Create an Amazon Comprehend service instance in your AWS account. Amazon Comprehend is a natural language processing (NLP) service that provides pre-trained models for sentiment analysis.



Machine learning

Amazon Comprehend

Natural Language Processing and Text Analytics

Amazon Comprehend is a natural language processing (NLP) service that uses machine learning to find insights and relationships in text.

Start analyzing text

Jump in and try our APIs for Amazon Comprehend.

[Launch Amazon Comprehend](#)

Pricing (US)

With Amazon Comprehend, you pay only for what you use. You are charged based on the amount of text processed on a monthly basis, and there are no minimum fees and no upfront commitments.

[Learn more](#)

Getting started

How it works

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Use the Amazon Comprehend service to create a sentiment analysis job. Specify the location of your text data stored in Amazon S3, and configure the desired settings, such as the language of the text and the output format.

Amazon Comprehend

Real-time analysis

Real-time analysis

Analyze text in real time by using built-in or custom models. With built-in models, you can recognize entities, extract key phrases, detect dominant languages, detect PII, determine sentiment, detect targeted sentiment, or analyze syntax. With custom models, you can detect entities that you define, or you can classify documents using your own categories or labels.

Overview

Real-time analysis with built-in models

Use Amazon Comprehend built-in models to analyze content in real time.

Custom real-time analysis with endpoint

[Create an endpoint](#) for your custom model to classify documents or detect custom entities in real time.

Input data

[Supported languages](#)

Analysis type

☒ **Built-in**

View real-time insights based on AWS built-in models.

☐ **Custom**

View real-time insights based on custom models from an endpoint you've created.

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Trigger the sentiment analysis job in Amazon Comprehend, which will process your text data and generate sentiment analysis results.

The screenshot shows the Amazon Comprehend console interface. On the left, the 'Amazon Comprehend' sidebar is visible with options like 'Real-time analysis', 'Analysis jobs', and 'Customization'. The main content area is titled 'Real-time analysis with built-in models' and includes a sub-header 'Input data'. Under 'Analysis type', the 'Built-in' option is selected. The 'Input text' field contains a paragraph about cloud computing. Below the text field, there are 'Clear text' and 'Analyze' buttons. The footer of the console shows 'CloudShell', 'Feedback', 'Language', and copyright information for Amazon Web Services India Private Limited.

Once the sentiment analysis job is complete, you can access the results through the Amazon Comprehend service. The results will typically include sentiment scores for each text, indicating the detected sentiment (positive, negative, or neutral) and the confidence level associated with each sentiment.

1)Entities

Amazon Comprehend

Real-time analysis
Analysis jobs
Customization
Custom classification
Custom entity recognition
Flywheels [New](#)
Endpoints

Entities | Key phrases | Language | PII | Sentiment | Targeted sentiment | Syntax

Analyzed text

storage, development tools, networking capabilities, and more—hosted at a remote data center managed by a cloud services provider (or CSP). The CSP makes these resources available for a monthly subscription fee or bills them according to usage. Scale more easily and cost-effectively: Cloud provides elasticity—instead of purchasing excess capacity that sits unused during slow periods, you can scale capacity up and down in response to spikes and dips in traffic. You can also take advantage of your cloud provider's global network to spread your applications closer to users around the world.

The term 'cloud computing' also refers to the technology that makes cloud work. This includes some form of virtualized IT infrastructure—servers, operating system software, networking, and other infrastructure that's abstracted, using special software, so that it can be pooled and divided irrespective of physical hardware boundaries. For example, a single hardware server can be divided into multiple virtual servers.

Results

Search

Entity	Type	Confidence
single hardware	Quantity	0.80

Application integration

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2)Key phrases

Amazon Comprehend

Real-time analysis
Analysis jobs
Customization
Custom classification
Custom entity recognition
Flywheels [New](#)
Endpoints

Entities | **Key phrases** | Language | PII | Sentiment | Targeted sentiment | Syntax

Analyzed text

Cloud computing is on-demand access, via the internet, to computing resources—applications, servers (physical servers and virtual servers), data storage, development tools, networking capabilities, and more—hosted at a remote data center managed by a cloud services provider (or CSP). The CSP makes these resources available for a monthly subscription fee or bills them according to usage. Scale more easily and cost-effectively: Cloud provides elasticity—instead of purchasing excess capacity that sits unused during slow periods, you can scale capacity up and down in response to spikes and dips in traffic. You can also take advantage of your cloud provider's global network to spread your applications closer to users around the world.

The term 'cloud computing' also refers to the technology that makes cloud work. This includes some form of virtualized IT infrastructure—servers operating system software, networking, and other infrastructure that's abstracted, using special software, so that it can be pooled and divided.

Results

Search

Key phrases	Confidence
Cloud computing	0.99+
on-demand access	0.99+
the internet	0.99+
computing resources—applications	0.80

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Amazon Comprehend

- Real-time analysis
- Analysis jobs
- Customization
 - Custom classification
 - Custom entity recognition
 - Flywheels [New](#)
 - Endpoints

operating system software, networking, and other infrastructure that's abstracted, using special software, so that it can be pooled and divided.

▼ Results

Search < 1 2 3 4 5 > ⚙

Key phrases	Confidence
Cloud computing	0.99+
on-demand access	0.99+
the internet	0.99+
computing resources—applications	0.80
servers	0.98
physical servers	0.99+
virtual servers	0.99+
data storage	0.99+
development tools	0.99+
networking capabilities	0.99+

► Application integration

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Generated API call and response

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networking capabilities 0.99+

▼ Application integration

API call and API response of DetectKeyPhrases API. [Info](#)

API call

```
1 {
2   "Text": "Cloud computing is on-demand access, via the internet, to computing resources-applications, servers (physical servers and virtual servers), data storage, development tools, networking capabilities, and more-hosted at a remote data center managed by a cloud services provider (or CSP). The CSP makes these resources available for a monthly subscription fee or bills them according to usage.Scale more easily and cost-effectively: Cloud provides elasticity-instead of purchasing excess capacity that sits unused during slow periods, you can scale capacity up and down in response to spikes and dips in traffic. You can also take advantage of your cloud provider's global network to spread your applications closer to users around the world.\n\nThe term 'cloud computing' also refers to the technology that makes cloud work. This includes some form of virtualized IT infrastructure-servers, operating system software, networking, and other infrastructure that's abstracted, using special software, so that it can be pooled and divided irrespective of physical hardware boundaries. For example, a single hardware server can be
```

Copy

API response

```
1 {
2   "KeyPhrases": [
3     {
4       "Score": 0.996488821678162,
5       "Text": "Cloud computing",
6       "BeginOffset": 0,
7       "EndOffset": 15
8     },
9     {
10      "Score": 0.9960875511169434,
11      "Text": "on-demand access",
12      "BeginOffset": 19,
13      "EndOffset": 35
14    },
15    {
16      "Score": 0.9994761943817139,
17      "Text": "the internet",
18      "BeginOffset": 41,
19      "EndOffset": 53
20    },
21  ],
22  "Score": 0.80838224411011,
23  "Text": "computing resources-applications"
24  },
25  "BeginOffset": 58,
26  "EndOffset": 90
```

Copy

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3)Language

aws

Services

Search

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Amazon Comprehend

Real-time analysis

Analysis jobs

Customization

Custom classification

Custom entity recognition

Flywheels

Endpoints

Analyzed text

Cloud computing is on-demand access, via the internet, to computing resources—applications, servers (physical servers and virtual servers), data storage, development tools, networking capabilities, and more—hosted at a remote data center managed by a cloud services provider (or CSP). The CSP makes these resources available for a monthly subscription fee or bills them according to usage.Scale more easily and cost-effectively: Cloud provides elasticity—instead of purchasing excess capacity that sits unused during slow periods, you can scale capacity up and down in response to spikes and dips in traffic. You can also take advantage of your cloud provider's global network to spread your applications closer to users around the world. The term 'cloud computing' also refers to the technology that makes cloud work. This includes some form of virtualized IT infrastructure—servers, operating system software, networking, and other infrastructure that's abstracted, using special software, so that it can be pooled and divided into multiple virtual servers."

Results

Language

English, en

0.99 confidence

Application integration

API call and API response of DetectDominantLanguage API.

API call

API response

OUTPUT (SENTIMENT ANALYSIS):

Text Analysis to Neutral , Positive , Negative and Mixed

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Amazon Comprehend

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Results

Sentiment

Neutral

0.96 confidence

Positive

0.03 confidence

Negative

0.00 confidence

Mixed

0.00 confidence

Application integration

API call and API response of DetectSentiment API.

API call

API response

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Services

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Amazon Comprehend

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Custom classification

Custom entity recognition

Flywheels

Endpoints

Results

Search

< 1 2 3 4 5 6 7 ... 20 >

Word	Part of speech	Confidence
Cloud	Noun	0.37
computing	Noun	0.97
is	Verb	0.96
on	Adposition	0.92
-	Punctuation	0.99+
demand	Noun	0.98
access	Noun	0.99+
,	Punctuation	0.99+
via	Adposition	0.99+
the	Determiner	0.99+

Application integration

API call and API response of DetectSyntax API.

CloudShell

Feedback

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Custom entity recognition

Flywheels

Endpoints

the

Determiner

0.99+

Application integration

API call and API response of DetectSyntax API.

API call

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API response

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