



## Sentiment Analysis from Text

### Readme

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Version 1.0

05/12/2019

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# 1. Introduction

This document contains all essential information for the user to make full use of the Bot. This manual includes a description of the functions available and step-by-step procedures for setup & configuration of the Bot and the MeaningCloud license.

## 1.1 Overview

This Bot reads a text and performs a detailed multilingual sentiment analysis. The text provided is analyzed using advanced natural language processing techniques to detect the polarity of the whole text, as well as the polarity associated to both entities and concepts found in the text.

The process involved in the Bot takes the following steps:

1. Read data from text source to be analyzed.
2. Send request to MeaningCloud API.
3. Receive response from MeaningCloud API with the sentiment analysis of the text.

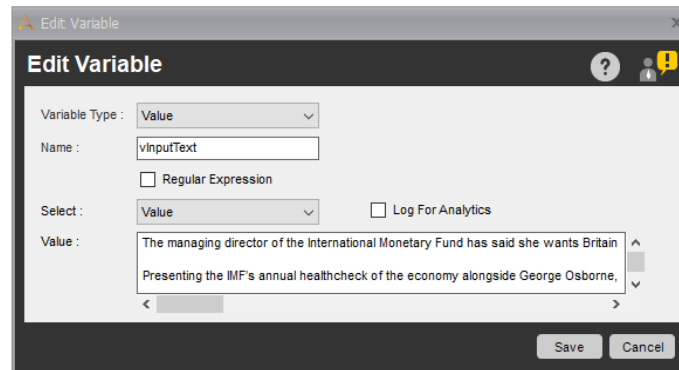
The possible output polarities are the following:

Polarity	Value
P+	Strong positive
P	Positive
NEU	Neutral
N	Negative
N+	Strong negative
NONE	Without sentiment

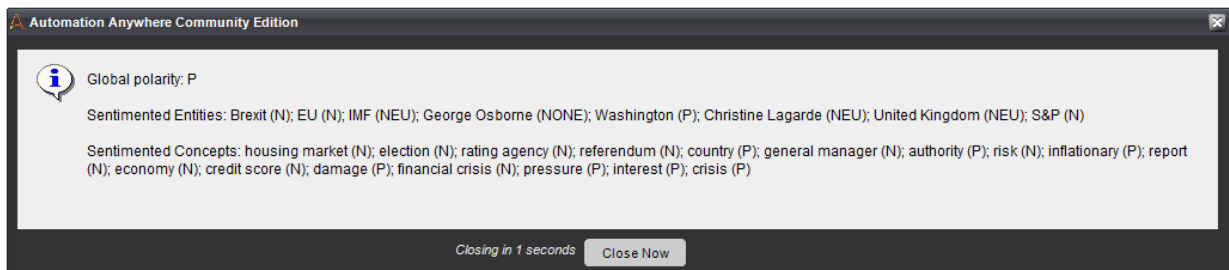
### Visual Flow



## Input: Text read from vInputTextAA variable



## Output: Response from API



## 1.2 Common Use cases



Examples of some use cases include:

- Detect sentiment from different reviews extracted from a forum.
- Detect sentiment from conversations in Social media
- Detect sentiment from a contact center interaction.
- Detect sentiment from a received mail.

## 2. Requirements & Prerequisites

### 2.1 System Requirements



For the PC or Server where the Bot needs to run:

- ✓ RAM: 8GB or higher.
- ✓ Processor: 3.5 GHz+ with 4 multi-cores or higher.
- ✓ Storage: 2GB or higher in the AA Client Installation drive

Further information is shown in [Enterprise Client & Control Room system requirements](#).

### 2.2 Prerequisites



Software needed:

- ✓ AA Enterprise Client 11.x
- ✓ AA Enterprise Control Room 11.x

Accounts / License needed:

- ✓ MeaningCloud License Key (A [MeaningCloud account](#) is required to obtain a free key)
- ✓ AA Enterprise License

### 2.3 Security Measures



There are some security best practices recommendations that you may follow with your Bot:

- It is recommended to store the MeaningCloud license key in a secured environment like the Automation Anywhere Credential Vault.

## 3. Getting Started

### 3.1 Skill Matrix



The functionality of the Bot has been divided into a set of skills.

Below is an overview of how the TaskBots and MetaBots map to these skills:

Skill	TaskBot Files	MetaBot Files
Extract sentiment from a text, including aspect-based sentiment for the entities and concepts detected	Sentiment Analysis From Text.atmx	MeaningCloudSentimentMetabot.mbot

Skill	MetaBot Files
Perform requests to MeaningCloud's Sentiment Analysis API and retrieve the response	MeaningCloudSentimentMetabot.mbot

## 3.2 Installation Hierarchy



Once the Bot is downloaded and installed, the installer creates the files in the folder structure as shown below:

### Folder Structure on your Machine

Folder Structure	Description
<p>&lt;AA Application Path&gt;</p> <ul style="list-style-type: none"> <li>• <b>My Tasks</b> <ul style="list-style-type: none"> <li>○ <b>Bot Store</b> <ul style="list-style-type: none"> <li>▪ <b>SentimentAnalysisFromText-MeaningCloud</b> <ul style="list-style-type: none"> <li>• <b>My Tasks</b> <ul style="list-style-type: none"> <li>○ Sentiment Analysis From Text.atmx</li> </ul> </li> <li>• <b>Error Folder</b> <ul style="list-style-type: none"> <li>○ <b>Logs</b> <ul style="list-style-type: none"> <li>▪ Error Log Day-Month-Year.txt</li> </ul> </li> <li>○ <b>Snapshots</b> <ul style="list-style-type: none"> <li>▪ Error Snap Day-Month-Year HourMinuteSecond.png</li> </ul> </li> </ul> </li> </ul> </li> </ul> </li> <li>• <b>My MetaBots</b> <ul style="list-style-type: none"> <li>○ MeaningCloudSentimentMetabot.mbot</li> </ul> </li> </ul> </li> </ul>	<p><b>&lt;AA Application Path&gt;</b> is the location where AA files are stored on your machine.</p> <p><b>Bot Store</b> folder contains all the Bots installed from the Bot Store.</p> <p><b>SentimentAnalysisFromText-MeaningCloud</b> contains files and folders needed for the Bot.</p> <p><b>My Tasks</b> folder contains all the developed TaskBots.</p> <p><b>Error Folder</b> is where logs and snapshots of screens will be placed if something goes wrong with the Bot during execution.</p> <p><b>My Metabots</b> folder contains the developed Metabots needed for the Bot execution.</p>

## 3.3 Quick Start

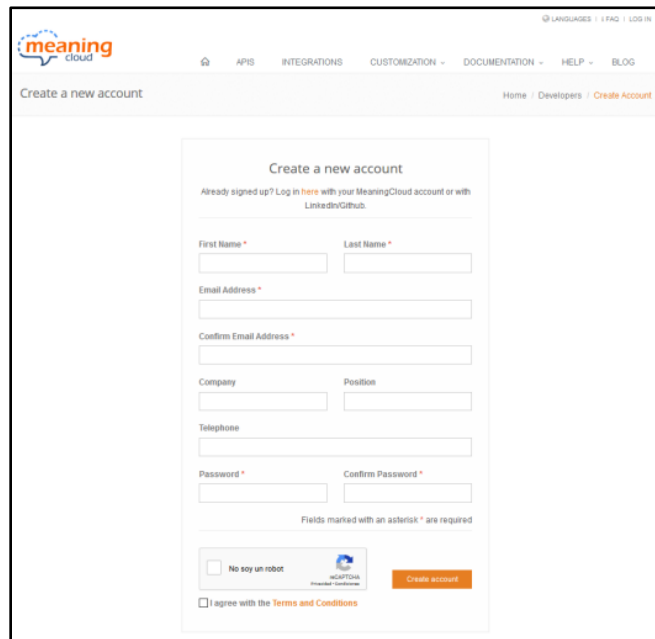
### 3.3.1 Setup



#### Step 1: Setting up a MeaningCloud account

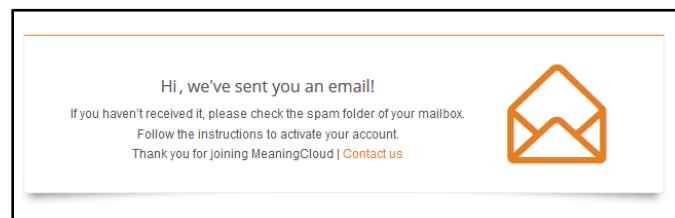
In order to use Bots that include MeaningCloud applications, a valid license key is needed. The first step is to create an account in MeaningCloud:

<https://www.meaningcloud.com/developer/create-account>

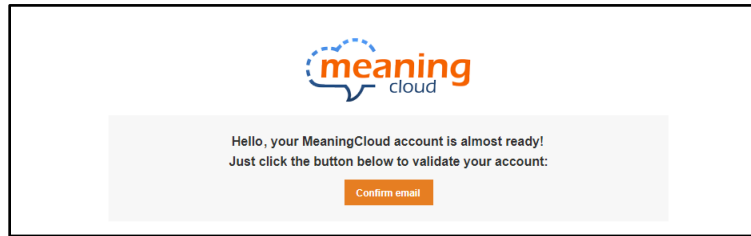


The screenshot shows the 'Create a new account' page on the MeaningCloud website. The page has a header with the MeaningCloud logo and navigation links: APIS, INTEGRATIONS, CUSTOMIZATION, DOCUMENTATION, HELP, and BLOG. Below the header, there's a sub-header 'Create a new account' with links for 'Home', 'Developers', and 'Create Account'. The main form area is titled 'Create a new account' and includes a link for already signed-up users. The form fields are: First Name, Last Name, Email Address, Confirm Email Address, Company, Position, Telephone, Password, and Confirm Password. There are checkboxes for 'No soy un robot' (with a CAPTCHA image) and 'I agree with the Terms and Conditions'. A 'Create account' button is at the bottom right.

After registering, you will receive a confirmation mail in your Inbox.



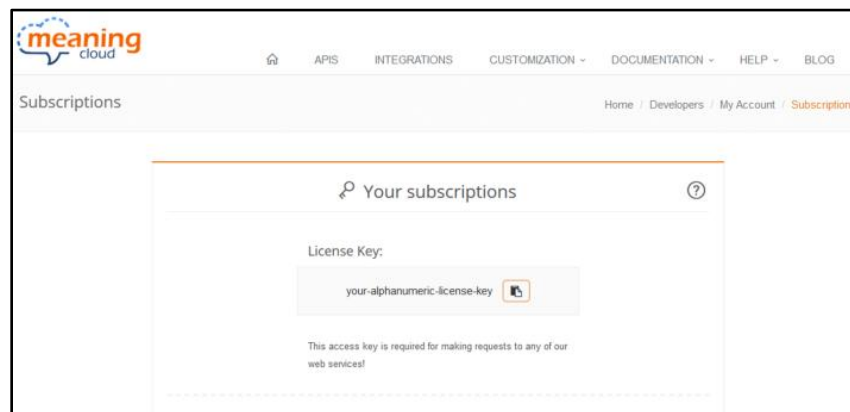
Review your mail Inbox and confirm your registration in the MeaningCloud mail that has been sent.



## Step 2: Obtain your free license key

Log in the Developer area (<https://www.meaningcloud.com/developer/login>) and click on “Subscription” at the very top of the page.

The license key is available in the “Subscriptions” section. Copy its value to the clipboard to store it in a Bot variable or in the Credential Vault.



By creating an account in MeaningCloud, you are automatically subscribed to the Free plan, which enables you to make up to 20k credits per month (a credit is a request up to 500 words, that is, a request for a text with 600 words, would cost 2 credits) at a rate of 2 requests per second. It also limits the user resources you can use. To increase these limits, you can [upgrade your plan](#).

## 3.3.2 Configuration



Below is a table that summarizes the input and output variables that are present inside the Bot. Mandatory input variables are necessary to run the Bot properly. A description and examples are included in the table.

INPUT VARIABLES				
Variable Name	Type	Mandatory	Purpose	Example Input
vInputLanguage	Text	Yes	It specifies the language in which the text must be analyzed.	en (for other language examples click <a href="#">here</a> )
vInputText	Text	Yes	Input text that's going to be analyzed.	The total value of the company is increasing.
vLicenseKey	Text	Yes	The license key is required for making requests to any of our web services. You can get a valid license key for free just by creating an account at <a href="https://www.meaningcloud.com">https://www.meaningcloud.com</a> .	<A license key provided by MeaningCloud.>
vOutputWithOntologyTypes	Text	No	Include the ontology type in the response. By default it's set to false.	true
vSentimentModel	Text	No	Sentiment model chosen.	general_en (for other model examples click <a href="#">here</a> )
vServerURL	Text	No	Address of the API server. By default it's set to our SaaS deployment. Users with an on-premises deployment can use it as the API server.	<a href="https://api.meaningcloud.com">https://api.meaningcloud.com</a>
vUserCustomDictionary	Text	No	User dictionaries allow you to include user-defined entities and concepts in the sentiment analysis. Several dictionaries can be combined separating them with  .	business_custom_english

OUTPUT VARIABLES				
Variable Name	Type	Mandatory	Purpose	Example Output
vResponseJSON	Text	No	The result of the sentiment analysis in JSON format.	<JSON string>
vResponseGlobalPolarity	Text	No	Global polarity from the text analyzed.	P+
vResponseEntities	Text	No	Entities detected in the text with their corresponding polarity in the text (and ontology type if configured).	United Kingdom (NEU)
vResponseConcepts	Text	No	Concepts detected in the text with their corresponding polarity in the text (and ontology type if configured).	country (P); risk (N)

## 4. Reports

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*There are no Bot Insight Reports generated for this Bot.*

## 5. Logs



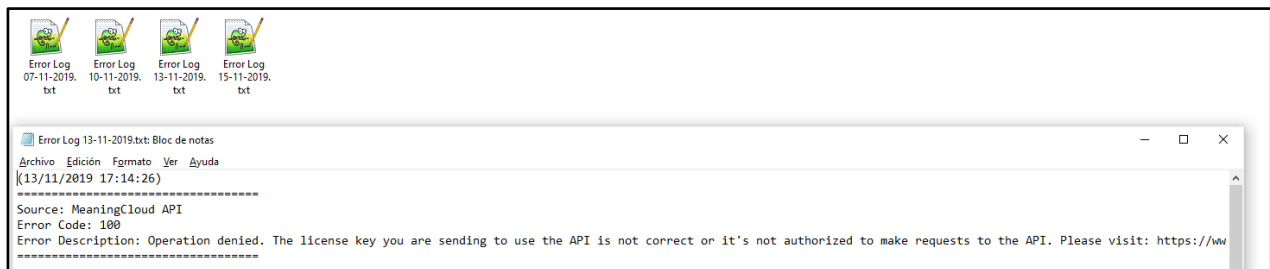
In case of Errors, Error Logs & Screenshots are generated within Error Folder (Highlighted below in yellow)

- My Tasks
  - Bot Store
    - SentimentAnalysisFromText-MeaningCloud
      - Error Folder
        - Logs (Folder)
          - Error Log Day-Month-Year.txt
        - Snapshots (Folder)
          - Error Snap Day-Month-Year HourMinuteSecond.png

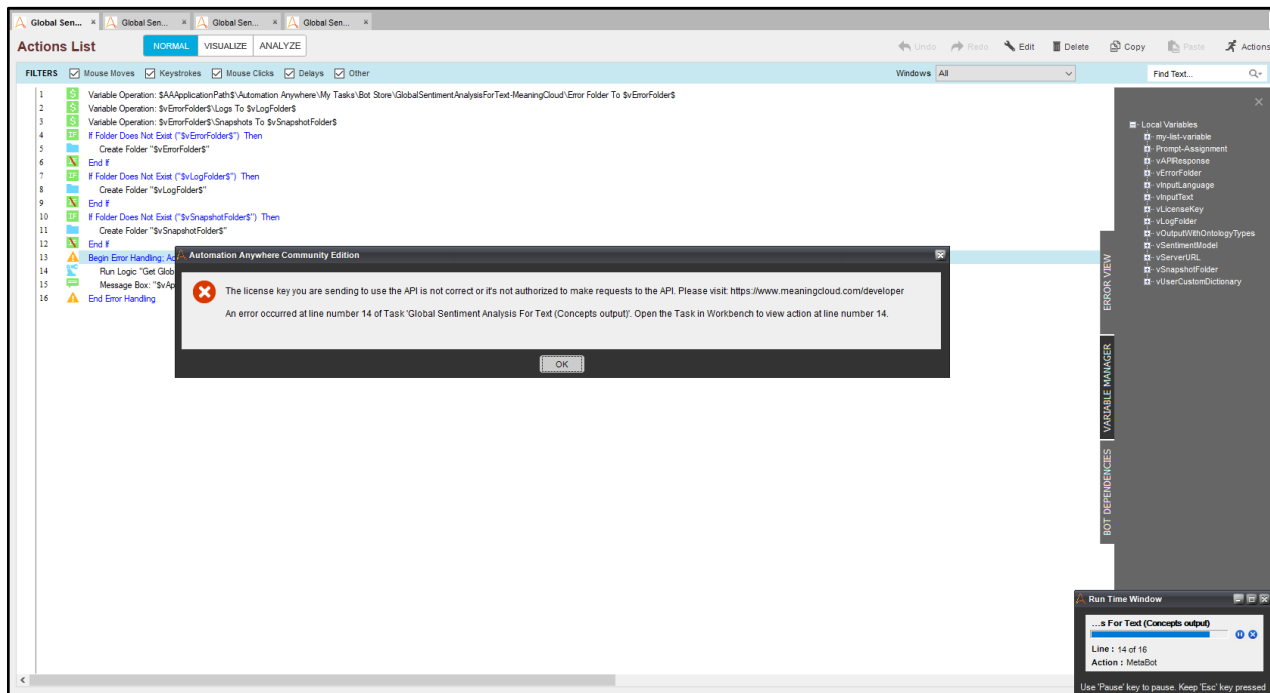
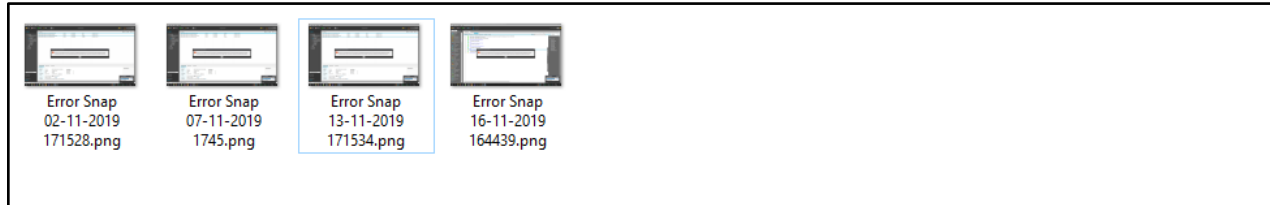
**Error Logs will contain the below information:**

- Task Name
- Error Line Number
- Error Description
- Generated Timestamp

**Example of Log File:**



## Example of Screenshot Generated Error File:



## 6. Troubleshooting & Support

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### 6.1 Support



You can send us an email to [support@meaningcloud.com](mailto:support@meaningcloud.com).



Questions on Bot Functionality or Feature can also be posted to the Community site [A-People](#).



Automation Anywhere provides a [Product Documentation portal](#) which can be accessed for more information about Automation Anywhere products and guidance on building bots and Digital Workers.

### 6.2 FAQs



Q: I am getting an error with the message 'The license key you are sending to use the API is not correct'.

A: Please check that the Bot variable 'vLicenseKey' contains the key license provided by MeaningCloud.

Q: How can I get a free key license to use MeaningCloud services?

A: A MeaningCloud account is required in order to obtain a free license key. Please visit the following link in order to create a new account: <https://www.meaningcloud.com/developer/create-account>

Q: I'm getting an error with the message 'Upgrade your plan to have a higher volume or wait for the credits to be reset when your billing month is over'.

A: By creating an account in MeaningCloud, you are automatically subscribed to the Free plan, which provides 20k credits per month. If your consumption is higher than that, just upgrade your plan to have a higher limit: <https://www.meaningcloud.com/developer/account/subscriptions/upgrade>

Q: Which languages and models are available to use with the MeaningCloud Sentiment analysis?

A: A list of available languages and models are available in <https://www.meaningcloud.com/developer/sentiment-analysis/doc/2.1/request#sentiment-models-language>

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## Appendix A: Record of Changes

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No.	Version Number	Date of Change	Author	Notes
1	1.0	05/12/2019	MeaningCloud	Version 1 Release

## Appendix B: Acronyms

No.	Acronym	Description
1	AA	Automation Anywhere
2	JSON	JavaScript Object Notation
3	API	Application Programming Interface
4	URL	Uniform Resource Locator
5	RAM	Random Access Memory
6	PC	Personal Computer
7	OS	Operating System

## Appendix C: References

No.	Topic	Reference Link
1	Create a Credential in Credential Vault	Click <a href="#">here</a>
2	System Requirements – Client	Click <a href="#">here</a>
3	System Requirements – Control Room	Click <a href="#">here</a>
4	A-People Community Site	Click <a href="#">here</a>
5	Automation Anywhere Documentation Portal	Click <a href="#">here</a>
6	MeaningCloud Developer site	Click <a href="#">here</a>
7	MeaningCloud Sentiment Analysis: Documentation	Click <a href="#">here</a>
8	MeaningCloud Sentiment Analysis: Models and language	Click <a href="#">here</a>
9	MeaningCloud Sentiment Analysis: API Response	Click <a href="#">here</a>
10	MeaningCloud Account creation	Click <a href="#">here</a>