

Microsoft Azure Certified Data & AI Track

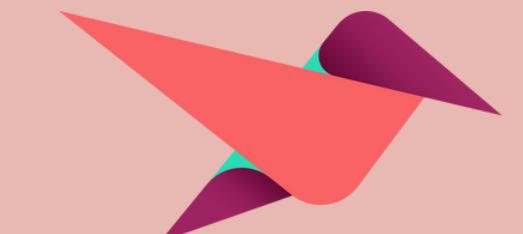


BUSINESS CASE TECHIONISTA HOLIDAYS GUIDE



BUSINESS CASE - TECHIONISTA HOLIDAYS

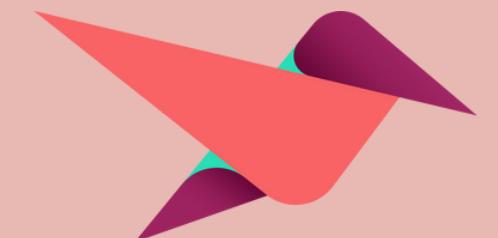
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BUSINESS CASE - TECHIONISTA HOLIDAYS

Your assignment



The assignment

Case

Going on vacation is lovely, but half the fun is in planning and anticipating your trip. Scrolling and sifting through the endless options for days, taking into account all of these different factors to organize the perfect getaway. Sound familiar?

Finding suitable accommodation is an important part of planning a vacation and that's what this business case is all about! You'll be working with an extensive dataset from Techionista Holidays. Among other information, it contains reviews from their users after their stay at a hotel they booked through the Techionista Holidays website. These reviews date from 2015 to 2017 and contain lots of information on how travelers have experienced their stay in various luxurious hotels across Europe. Techionista Holidays managers would love to gain more insight into the different types of travelers and their feedback. These valuable insights can help them improve Techionista's Holidays website and their capability of catering to their users needs.

Challenge

These reviews consist of free text fields and that's the challenging bit. While these text fields contain a lot of information, it's hard to make aggregated conclusions since the data is qualitative and not numerical.

Reviewing every written statement about the hotels would be a fool's errand...

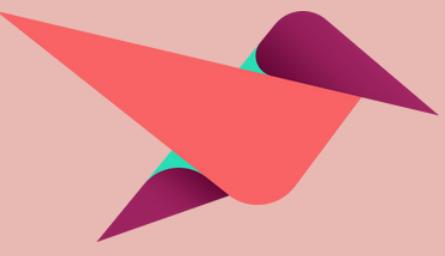
Azure Cognitive Services

Luckily, there is an easier solution! With Power BI, it's possible to make use of various functions from Azure Cognitive Services. During this business case, you will make use of a sentiment analysis function. This function, which is based on an AI model, determines the sentiment score of a text and can extract key words from it. A great way to quickly gain insight into thousands of reviews.

Disclaimer: the dataset that you will be working with is publicly available to everyone. Please be noted that the data is originally owned by Booking.com. Unfortunately, we can't use that name, that's why we transformed it to Techionista Holidays.

BUSINESS CASE - TECHIONISTA HOLIDAYS

Your assignment



Your assignment

In short

For this assignment, you will work in groups of four to five people. The first step will be to connect to the data source and clean the data. Then, you will have to set up the Azure Cognitive Services in Azure and run the function in Power BI. The last steps of the assignment will be to build a report or dashboard and present it. Make sure you prepare a short presentation of five minutes.

Important: aside from the end result, being a report/dashboard, we also like to receive a detailed *step-by-step plan* of the steps you've taken while working on the business case. So make sure to keep track of your steps as soon as you start working on the business case!

Goal

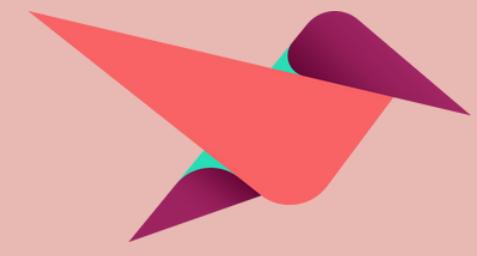
This assignment is aimed at preparing you for your future job by providing you with hands-on experience working with Power BI. It includes parts of the profession of Data Engineer as well as Data Analyst. You will collect the data, clean it, and build a report or dashboard.

Note: good to realize is that not everything is laid out in front of you but during this assignment you also have to do your own research and apply it to your assignment.



BUSINESS CASE – TECHIONISTA HOLIDAYS

Getting started



Getting started

1. Email account

Create a new Outlook or Hotmail email account. And write down this new email account and password!

Note: an Azure pass can only be activated using a Microsoft email address (Hotmail or Outlook) and only one pass can be activated per email address.

2. Azure-pass

Per group you will receive one Azure Pass. An Azure pass is a token that gives you full access to the Microsoft Cloud for a given amount of time and money. The Azure pass is valid for 30 days or until you run out of credits.

Activate your Azure pass on
<https://www.microsoftazurepass.com>

Note: To avoid issues, use an incognito/InPrivate window. Ensure the Azure pass page isn't linked to a previous or wrong Outlook/Hotmail account. If so, make sure to log out and use your newly created email address before you activate the new Azure pass.

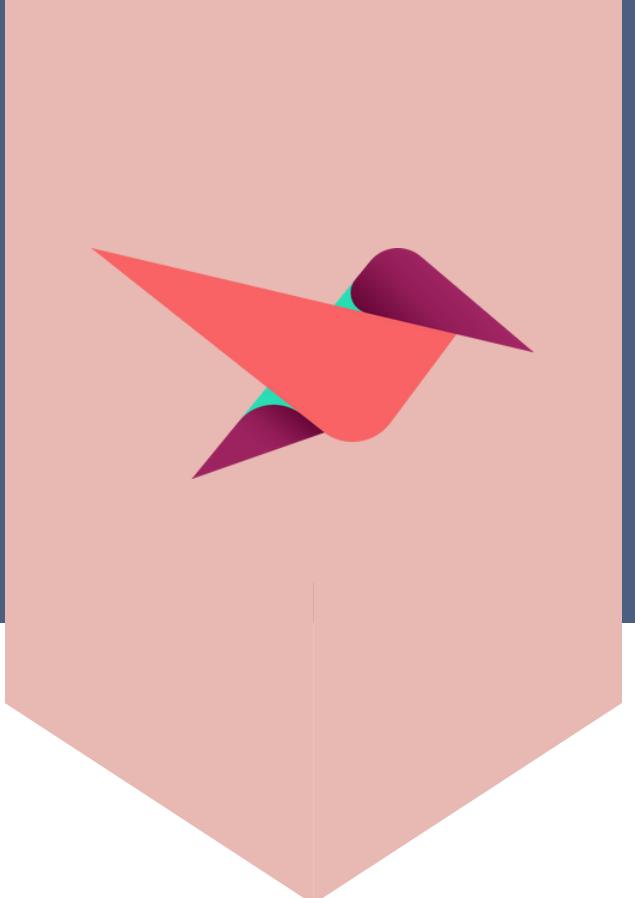
How do I know how much credit is left on my Azure Pass?

You can check out your Azure Pass balance using the following website:
<https://www.microsoftazuresponsorships.com/balance>



BUSINESS CASE - TECHIONISTA HOLIDAYS

Connect to the data source



Connect to the data source

Open Power BI Desktop and choose *Get Data*.

The dataset is stored in Azure Blob Storage (see screenshot 1).

To connect to Azure Blob Storage, you need to fill in the following details (Do this first in a notepad so you can make one sentence out of it, then copy the whole sentence into Power BI):

URL:

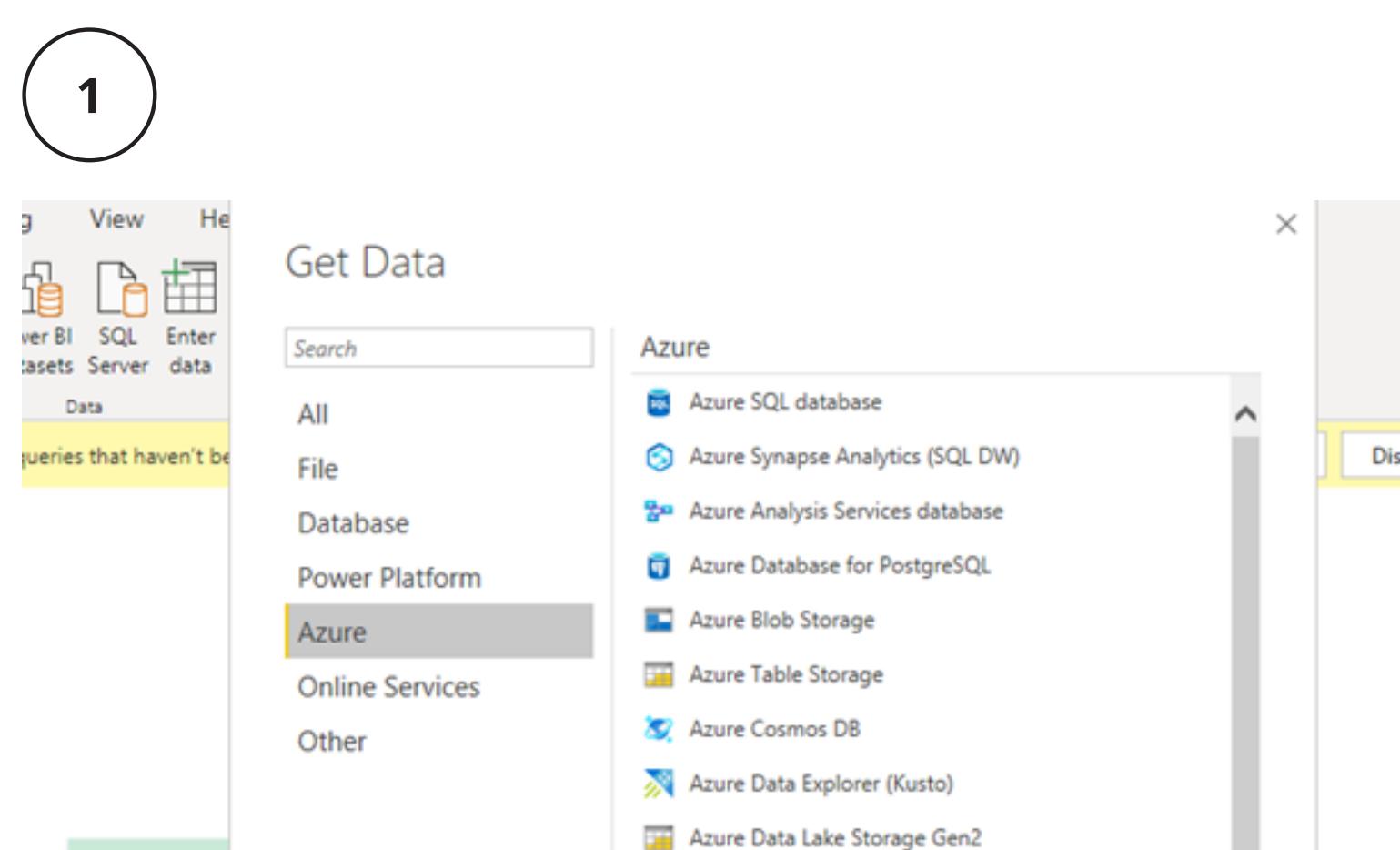
<https://pl300businesscase.blob.core.windows.net/pl300businesscase>

KEY:

++LZ+iltA/PflyqSAXu+2yz7O3PVwDWrCl
hle8f1xcHJb1rdkhJi7jMXYv0/jaPJRkcCdh
9/lpxvUOasqDEnaQ==

Note: make sure to *transform* the dataset first, do not load it yet!

Note: for this business case you will work with Power BI. Please do **not** make use of the Power BI Pro trial, since you don't need a Pro license for this business case. You will claim the Power BI Pro trial later on in this track.



BUSINESS CASE - TECHIONISTA HOLIDAYS

The dataset



The dataset

This dataset contains 515,000 customer reviews and scoring of 1493 luxury hotels across Europe.

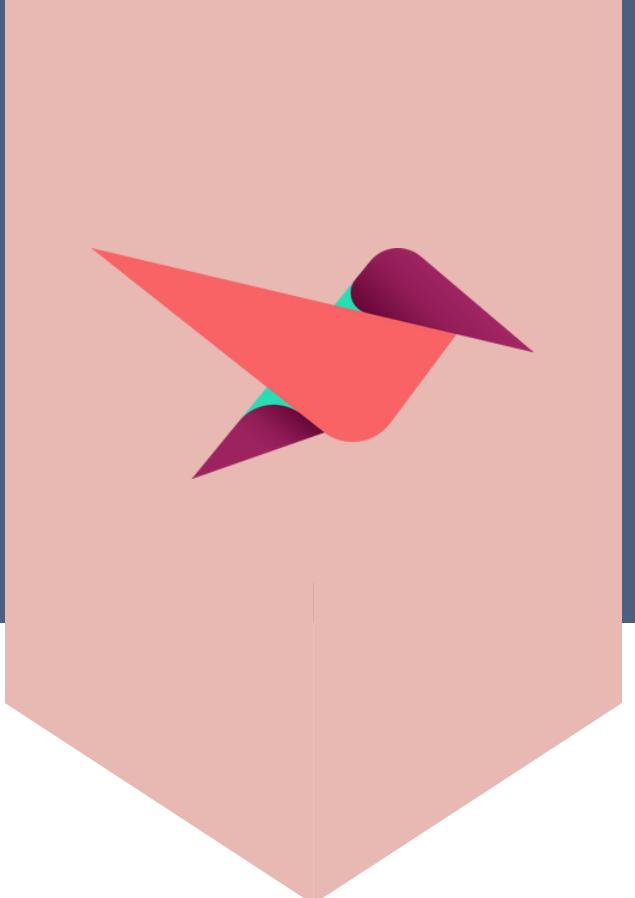
It contains 17 fields. The description of each field is as below:

- Hotel_Address: Address of hotel.
- Review_Date: Date when reviewer posted the corresponding review.
- Average_Score: Average score of the hotel, calculated based on the latest comment in the last year.
- Hotel_Name: Name of hotel
- Reviewer_Nationality: Nationality of reviewer
- Negative_Review: Negative review the reviewer gave to the hotel. If the reviewer does not give the negative review, then it should be: 'No Negative'
- Review_Total_Negative_Word_Counts: Total number of words in the negative review.
- Positive_Review: Positive review the reviewer gave to the hotel. If the reviewer does not give the positive review, then it should be: 'No Positive'
- Review_Total_Positive_Word_Counts: Total number of words in the positive review.

- Reviewer_Score: Score the reviewer has given to the hotel, based on his/her experience
- Total_Number_of_Reviews_Reviewer_Has_Given: Number of Reviews the reviewer has given in the past.
- Total_Number_of_Reviews: Total number of valid reviews the hotel has.
- Tags: Tags reviewers used in their review.
- days_since_review: Duration between the review date and scrape date (the scrape date being the date the data was scraped off the Booking.com website, which is about 4 years ago)
- Additional_Number_of_Scoring: There are also some guests who just made a scoring on the service rather than a review. This number indicates how many of those valid scores a hotel has that don't include a review
- lat: Latitude of the hotel
- lng: Longitude of the hotel

BUSINESS CASE - TECHIONISTA HOLIDAYS

Transforming and cleaning the data



Transforming and cleaning the data

In **PowerQuery**, open the content of the file (see screenshot 2).

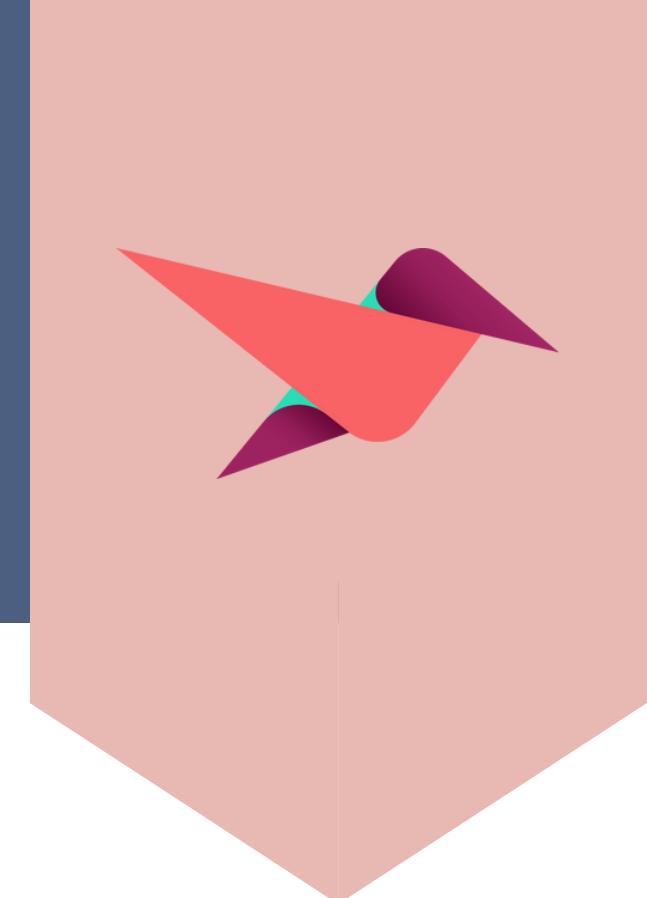
- Check for errors in the dataset.
Remove the errors.
- Check for incomplete data (Null values), if necessary, change Null values to Unknown.
- Do you see any other incomplete data? If so, change it as well.
- Make sure the headers have clear names.
- Format the columns correctly.
- Split the contents of one column into multiple columns in case you'd like to work with specific parts of the column content.
- Select *Keep Rows*, keep top 75 rows!
We will explain the reasoning behind this step later on.
>> See page 12

2

Hotel_Address	Additional_Number_of_Scoring	Review_Date	Average_Score	Hotel_Name
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	8/3/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	8/3/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/31/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/31/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/24/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/24/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/17/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/17/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/17/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/8/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/7/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/6/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/6/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/6/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/6/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	7/6/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	6/29/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	6/20/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	6/19/2017	77	Hotel Arena
s Gravestraat 55 Oost 1092 AA Amsterdam Netherlands	194	6/12/2017	77	Hotel Arena

BUSINESS CASE - TECHIONISTA HOLIDAYS

Setup the Cognitive Service in Azure



Setup the Cognitive Service in Azure

Cognitive Service runs in Azure. We first need to set this up before we can connect to it in Power BI.

- Go to <https://portal.azure.com/>
- Above in the blue search area type in: Cognitive Services.
- Choose the first option: Cognitive Services (see screenshot 3).
- You will see screenshot 4. Now you can pick which cognitive service you want to use and click on '+ Create'.
- For this example, I will show you what happens if you click on '+ Create' at Cognitive Services 'Language Service' (see screenshot 5).

3

The screenshot shows the Microsoft Azure portal homepage. At the top, there is a search bar with the text "cognitive service". On the left, a sidebar titled "Recent resources" lists "businesscase" and "Techionista". The main content area shows a list of "Azure services" under the heading "Services". The first item in the list is "Cognitive Services".

4

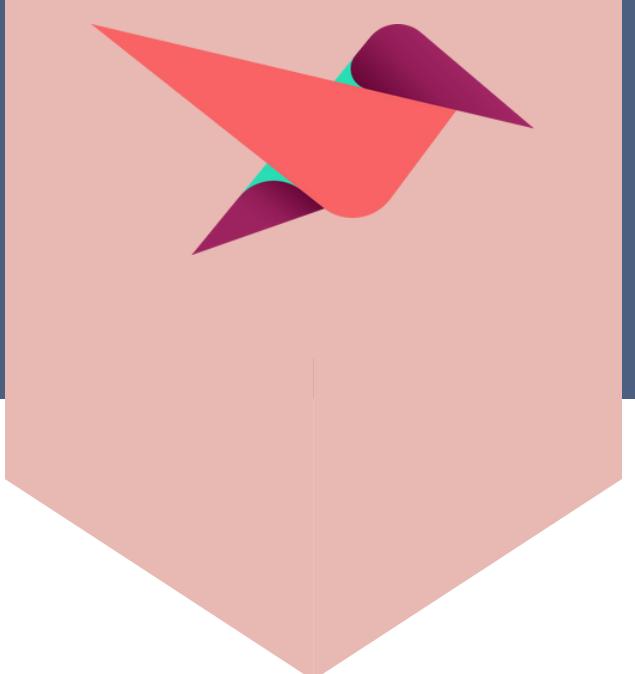
The screenshot shows the "Cognitive Services" page in the Azure portal. The left sidebar has "Language" selected under the "Language" category. The main content area displays various cognitive services: Anomaly detector, Content moderator, Personalizer, Language service, Translator, and Language understanding (classic). Each service has a "Create" and "View" button.

5

The screenshot shows the "Cognitive Services" page in the Azure portal. The left sidebar has "Language" selected under the "Language" category. The main content area displays the "Language Service". A red circle highlights the "+ Create" button located next to the "Language Service" entry.

BUSINESS CASE - TECHIONISTA HOLIDAYS

Setup the Cognitive Service in Azure



Setup the Cognitive Service in Azure

- Choose a custom feature or leave it open (this depends on your plan and what you need) and click on 'Continue to create your resource' (see screenshot 6).

- To create your Cognitive Services Language:
 - Select your resource group (this is the one you made earlier);
 - Select the region: (Europe) West Europe;
 - Fill in a name for your Cognitive Services Language Service (come up with your own name);
 - Select the pricing tier: Pick the Standard tier!
 - Check the two boxes;
 - Click on Review + Create;
 - Click on Create.

- If you have done all this, then wait a few minutes while your deployment is in progress. Go to the resource by clicking on the blue button, see screenshot 8.

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Microsoft Azure

Home > Cognitive Services > Select additional features

By default, Azure Cognitive Service for Language comes with several pre-built capabilities like sentiment analysis, key phrase extraction, pre-built question answering, etc. Select the features you want to enable as part of your Language service.

Default features

- ✓ Sentiment analysis
- ✓ Key phrase extraction
- ✓ Pre-built question answering
- ✓ Conversational language understanding (preview)
- ✓ Named entity recognition
- ✓ Text Summarization
- ✓ Text analytics for Health

Custom features

- Custom question answering**
Use this feature to answer user's questions over your data corpus. Requires Azure Cognitive Search. [Learn more](#).
- Custom text classification & extraction (preview)** ⓘ
Use this feature to customize text classification or custom text extraction. Requires Azure Storage. [Learn more](#).

[Continue to create your resource](#)

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Microsoft Azure

Home > Cognitive Services > Select additional features > Create

Language

*Basics Tags Review + create

Azure Cognitive Service for Language enables you to build apps with industry-leading natural language understanding capabilities without machine learning expertise. It consolidates familiar capabilities previously available in Text Analytics, QnA Maker, and Language Understanding (LUIS) into a unified service. With a single API call, harness decades of Microsoft's state-of-the-art research and ground-breaking NLU capabilities. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *

Instance details

Region *

Name *

Pricing tier [\(Learn More\)](#) *

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I confirm I have read and understood the notice below. *

Responsible AI Notice

Microsoft provides technical documentation regarding the appropriate operation applicable to this Cognitive Service that is made available by Microsoft. Customer acknowledges and agrees that they have reviewed this documentation and will use this service in accordance with it.

[Responsible Use of AI documentation for Text Analytics for Health](#) [Responsible Use of AI documentation for Text Analytics Pill](#)

[Review + create](#) [Next : Tags >](#)

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Microsoft Azure

Home > Microsoft.CognitiveServicesTextAnalyticsWithConfigurations | Overview

Deployment

Search (Ctrl+F)

Overview

Inputs

Outputs

Template

We'd love your feedback! →

Your deployment is complete

Deployment name: Microsoft.CognitiveServicesTextAnalyticsWithC... Start time: 22-11-2021 13:04:05
Subscription: Azure-abonnement 1 Resource group: Techionista Correlation ID: c28887ff-f467-4bff-a8d2-e8f609dc07b1

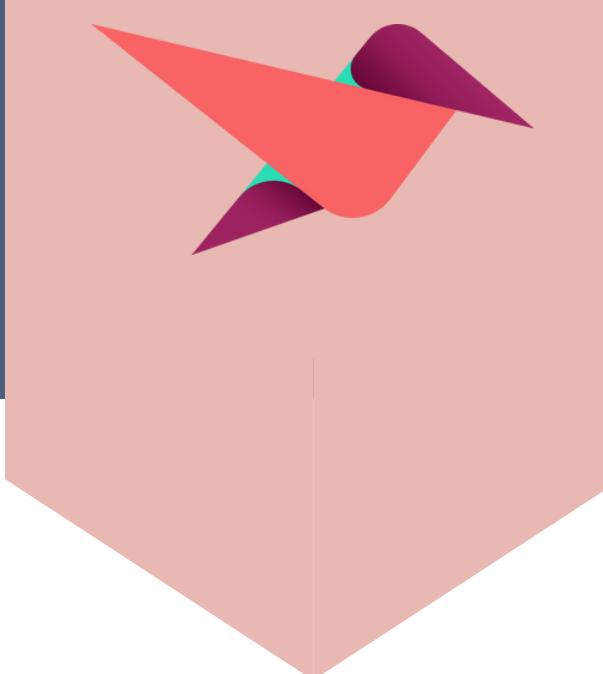
Deployment details (Download)

Next steps

Go to resource

BUSINESS CASE - TECHIONISTA HOLIDAYS

Setup the Cognitive Service in Azure



Setup the Cognitive Service in Azure

- Now you see screenshot 9.

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Microsoft Azure

Home > Microsoft.CognitiveServices.TextAnalyticsWithConfigurations > BusinessCaseCognitiveServicesLanguage

Overview

Help us improve Language. Take our survey!

Essentials

- Resource group (None) : Techionista
- Status : Active
- Location : West Europe
- Subscription (None) : Azure-abonnement 1
- Subscription ID : 00ade047-e040-4151-92bc-3c6368a1c3b1
- Tags (0) : Click here to add tags

Get Started Discover Develop Deploy

Text Analytics has been rebranded and incorporated into Azure Cognitive Service for Language. Learn More

Get Started with Language service

Azure Cognitive Service for Language enables you to build apps with industry-leading natural language understanding capabilities without machine learning expertise. Learn More

Discover Whether running our service in the cloud or on your own servers see what Language service can do in a variety of scenarios. Discover

Develop Learn the basics, check out our sample code and implement and customize your solution with Language Studio, no coding required. Develop

Deploy Learn on hosting option check out your support. Deploy

10

Microsoft Azure

Home > Microsoft.CognitiveServices.TextAnalyticsWithConfigurations > BusinessCaseCognitiveServicesLanguage

Overview

Subscription ID : 00ade047-e040-4151-92bc-3c6368a1c3b1

Tags (0) : Click here to add tags

Get Started Discover Develop Deploy

Quickstarts

We offer quickstarts in the most popular programming languages, each designed to have you running code in less than 10 minutes. Below are the most popular language quickstarts. Read our full documentation

Extraction Information

Learn how to use the Language SDK to detect the entities in unstructured text, identify key phrases or Pi, summarize text, recognize and categorize named entities, or customize an entity extraction model on top of your dataset.

Classify Text

Learn how to use the Language SDK to detect the sentiment of the text, or the sentiment of any piece of text you have. You can classify your text documents by customizing a model over your dataset using Natural Language Understanding.

Understand Conversational Language

Learn how to use the Language SDK to customize your domain specific Conversational Language Understanding model to classify conversational utterances and extract detailed information from them.

Keys and endpoint

You will need your key, endpoint, and service region to call the service. Select the Keys and Endpoint tab on the left hand side to see more.

These keys are used to access your Cognitive Service API. Do not share your keys. Store them securely—for example, using Azure Key Vault. We also recommend regenerating these keys regularly. Only one key is necessary to make an API call. When regenerating the first key, you can use the second key for continued access to the service.

Show Keys

KEY 1
KEY 2

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Microsoft Azure

Home > Microsoft.CognitiveServices.TextAnalyticsWithConfigurations > BusinessCaseCognitiveServicesLanguage

Overview

Help us improve Language. Take our survey!

Essentials

- Resource group (None) : Techionista
- Status : Active
- Location : West Europe
- Subscription (None) : Azure-abonnement 1
- Subscription ID : 00ade047-e040-4151-92bc-3c6368a1c3b1
- Tags (0) : Click here to add tags

Get Started Discover Develop Deploy

Language service containers

Want Language service API's also available as a Docker container. This enables you to run the API on-premises if you don't want your data to leave your machine or enable capabilities as the operation in the hosted API. Please note that container support is not available for all features under the Language support.

Get Started

Need help?

Check out your support options

- Open support request
- Post a question on Microsoft Q&A
- Add a question on Stack Overflow
- Submit feedback on the Azure feedback forum
- Participate in research: Join Cloud Design Insiders to share feedback, get sneak peaks, and drive the direction of future improvements with us.

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Microsoft Azure

Home > Microsoft.CognitiveServices.TextAnalyticsWithConfigurations > BusinessCaseCognitiveServicesLanguage

Select a Container

Run Language containers - in the cloud, on-premises, or at the edge.

Container support in Azure Cognitive Services allows developers to use the same rich APIs that are available in Azure, and enables flexibility in where to deploy and host the services that come with Docker containers. Learn More

Sentiment Analysis

Use sentiment analysis to find out what customers think of your brand, product or anything else the text for clues about positive or negative sentiment.

Get Started

Key Phrase Extraction (Preview)

Automatically extract key phrases to quickly identify the main concepts in a piece of text. For example, if you ask "What were wonderful staff?" the API returns the main talking points: "food" and "wonderful staff".

Get Started

Language Detection

You can detect which language the input text is written in and identify the language variants. Language detection is based on the request in a wide range of languages, variants, dialects, and some regional/cultural languages. The language code is provided with a score indicating the strength of the score.

Get Started

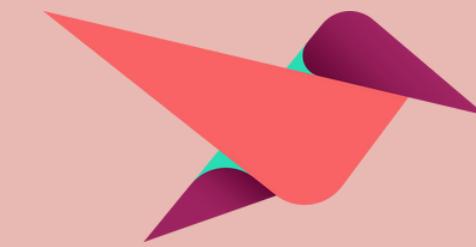
Text Analytics for health (Preview)

Text Analytics for health is a containerized service that extracts key information from unstructured medical and healthcare texts such as doctor's notes, discharge summaries, clinical documents, and electronic health records.

Get Started

BUSINESS CASE - TECHIONISTA HOLIDAYS

Setup the Cognitive Service in Azure



Setup the Cognitive Service in Azure

13

Microsoft Azure Search resources, services, and docs (G+ /)

Home > Microsoft.CognitiveServicesTextAnalyticsWithConfigurations > BusinessCaseCognitiveServicesLanguage > Select a Container >

Sentiment Analysis

BusinessCaseCognitiveServicesLanguage

Tell us about your experience using this container.

Get started with Sentiment Analysis container.
Next steps: Download, Deploy.
Learn more about Cognitive Services containers

1 Get your Sentiment Analysis container
Sentiment Analysis container can be downloaded at Docker hub.
[Go to Docker Hub](#)

2 To run the container you will need your service region endpoint and key.
[Get your service region and key](#)

3 Deploy
Install & Configure Sentiment Analysis container.
[Container recipes](#) [Configure container](#) [Containers FAQ](#) [Provide feedback](#)

14

Microsoft Docs Documentation Learn Q&A Code Samples Shows Events

Search Sign in

Azure Product documentation Architecture Learn Azure Develop Resources

Portal Free account

Filter by title

Azure Cognitive Services Documentation

Overview

- What are Cognitive Services?
- Language support
- Pricing

Quickstarts

How-To

- Plan and manage costs
- Diagnostic logging
- Manage resources

Deploy

Containers

- Cognitive Services containers
- Container image tags and releases notes
- Container FAQ
- Container recipes
- Other Container Services
- Cognitive Services containers documentation

Security

Use with big data

Concepts

Reference

Resources

Azure Cognitive Services containers

Azure Cognitive Services offers several containers to use AI on premises. Containers give you the flexibility to bring Cognitive Services closer to your data for compliance, security or other operational reasons.

About Cognitive Services containers

Container recipes

Vision containers

Decision container

Language containers

Speech containers

15

Filter by title

Azure Cognitive Service for Language documentation

Overview

- What is Azure Cognitive Service for language?
- What's new
- Migrate from LUIS, QnA Maker, and Text Analytics
- Pricing
- Language Studio quickstart
- Responsive use of AI
- Custom text classification (preview)
- Custom Named Entity Recognition (NER) (preview)
- Conversational language understanding (preview)
- Entity linking
- Language Detection
- Key phrase extraction
- Named Entity Recognition (NER)
- Personally Identifying Information (PII) detection
- Question answering
- Sentiment analysis and Opinion mining
- Text Analytics for health
- Text summarization (preview)
- Concepts
- Tutorials
- Enterprise readiness
- Resources

Conversational language understanding (preview)

Build an AI model to bring the ability to understand natural language into apps, bots, and IoT devices.

Language Studio

Question answering

This pre-configured feature provides answers to questions extracted from text input, using semi-structured content such as: FAQs, manuals, and documents.

Language Studio

REST API and client library

Tutorials

After you've had a chance to get started with the Language service, try our tutorials that show how to solve various scenarios.

- Extract key phrases from text stored in Power BI
- Use Power Automate to sort information in Microsoft Excel
- Use Flask to translate text, analyze sentiment, and synthesize speech
- Create a FAQ bot

Additional code samples

You can find more code samples on GitHub for the following languages:

- C#
- Java
- JavaScript
- Python

Deploy on premises using Docker containers

Use Language service containers to deploy API features on-premises. These Docker containers enable you to bring the service closer to your data for compliance, security, or other operational reasons. The Language service offers the following containers:

- Sentiment analysis
- Language detection
- Key phrase extraction
- Text Analytics for health

- Click on the language container you want to use. In this example, I have chosen the 'Sentiment Analysis' (see screenshot 13).

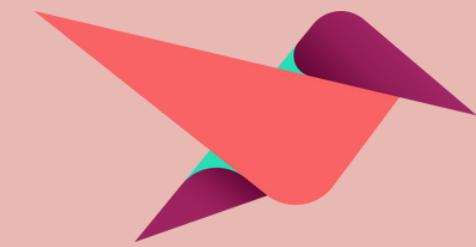
- Good to know:
 - You don't need the Docker Hub;
 - You already have the key and endpoint;
 - You can now continue on the next page of this guide (step: Create the Power Query function in the Query Editor) or you can follow the next steps.

- You can go to: Learn more about Cognitive Services containers.
- Under Language containers, how-to guide, click on Sentiment Analysis (see screenshot 14).

- Here you go to 'Tutorials' and click on 'extract key phrases from text stored in Power BI' (see screenshot 15).
- Now you see a tutorial about extract key phrases. You can use this for your dashboard/report in Power BI.

BUSINESS CASE - TECHIONISTA HOLIDAYS

Create the Power Query function in the Query Editor



Create the Power Query function in the Query Editor

In Power BI, we will leverage a Power Query Function in order to run the rows of the dataset through the Cognitive Services in Azure.

As was mentioned on the previous page: make sure to leverage the Power Query Function on only 75 rows first! After you manage to get the function working, you can increase the number of rows in your dataset to the amount of data you'd like to use.

To set up the Power Query Function and run the Azure Cognitive Services, you need to follow additional steps. These steps can be found here:

<https://docs.microsoft.com/en-us/azure/cognitive-services/language-service/key-phrase-extraction/tutorials/integrate-power-bi>

Note: this link provides you with multiple options for custom functions. It's up to you which custom function(s) you'd like to create and use.



BUSINESS CASE - TECHIONISTA HOLIDAYS

Why 75 rows?

Why 75 rows?

Please read this carefully before invoking the custom function explained on the next page!

You have to be aware of the amount of rows you use in Power BI when connecting to Azure Cognitive Services. Azure charges money per row you call the Cognitive Services API upon. Your Azure Pass provides you with a **150\$ budget**. You will be using the Standard tier of Cognitive Services, which costs **1.00\$ per 1000 rows**.

The dataset you're using consists of about 515,000 rows! If you would call the API upon the complete set of rows you would blast through your 150\$ budget immediately and then you can **not** invoke the custom function again.

Since your budget is 150\$, the maximum number of rows you can use to call the API upon, is **150,000 rows**. So make sure you first **keep 75 rows**, just to see if you can get everything to work properly when invoking the custom function. Then adjust the amount of rows to a dataset that you like to work with. So think about what rows of those 515,000 you'd like to use (ideas: pick certain countries, hotels, types of travelers, etc.). After you've chosen the dataset you want to work with, you can start invoking the custom function on that dataset.

Tip: you can check your **Text Records usage** in your Azure Portal under Monitoring > Metrics > Processed Text Records.

More info on the pricing of Cognitive Services:

<https://azure.microsoft.com/en-us/pricing/details/cognitive-services/language-service/#pricing>.

Using 75 rows only will also save you a lot of time loading your data during the transforming and cleaning process. Once you are ready you can adjust the rows again to the amount you prefer. You can ease up this process by making use of a **parameter**. Check out this blog by Marc Lelijveld to see how it works:

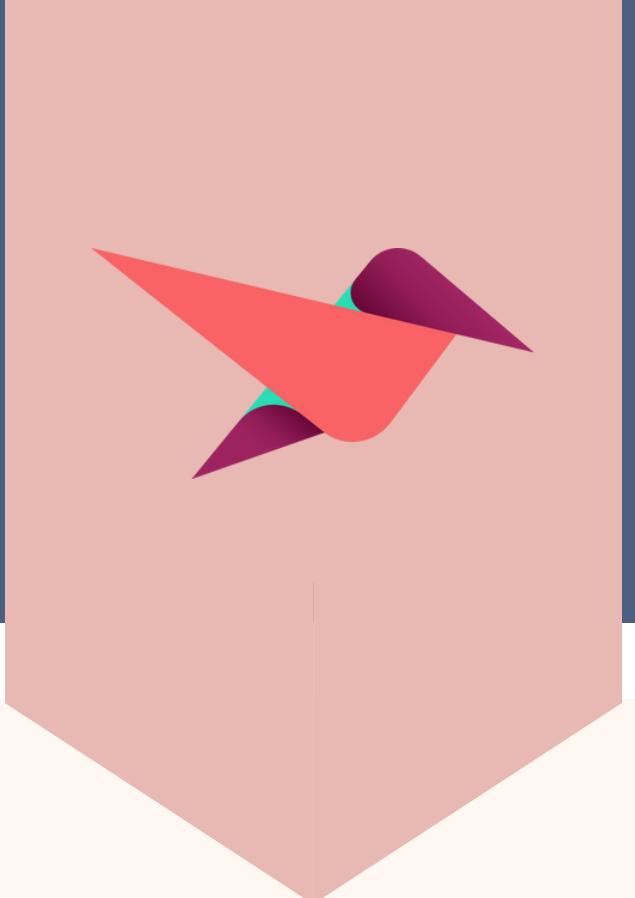
<https://data-marc.com/2019/05/12/top-n-to-improve-report-building/>

Note: ignore the part of the blog about query folding, it is not applicable to this business case!

Final tip: first figure out what part of the dataset you want to use, THEN start building your report/dashboard, not the other way around!

BUSINESS CASE - TECHIONISTA HOLIDAYS

Building



We won't tell you what the report/dashboard should look like, but we will give you some hints on what options may be important for the Techionista's Holidays managers. Therefore you can follow the options below, but you're free to do as you please. You can modify the options below or add other visualizations if you think they add interesting insights. Remember to follow the corporate house style of Techionista's Holidays when building the report/dashboard.

- Ability to filter on different countries
- Ability to filter on different cities
- Ability to filter on different hotels
- Ability to filter on different dates
- Ability to filter on different type of trips
- Ability to filter on different types of travelers
- Ability to filter on different nationalities
- A map with an overview of all the hotel locations
- A visual that shows the division of i.e. different nationalities, traveler types, etc.
- Insights into the amount of positive and negative scores (tip: DAX SWITCH)
- The average sentiment score
- Word clouds with positive and negative key words

- The average sentiment score explained by i.e. city, type of trip, traveler type, etc. (tip: decomposition tree)
- Top 3 average lowest-scoring cities on the sentiment score/reviewer score
- A card visual with comments (tip: Stripper browser in the visual store, for this visual you need to make a simple index)

Besides making a report/dashboard you also start working with a detailed **step-by-step plan** and keep track of who does what, the choices you make and why.

You also write what feedback you have received during the presentation and what you have done with it.

In addition, you indicate how much time you spent on it, do certain subjects take more time than others?

Why do we ask you to make a detailed step-by-step plan? Because we like to know what steps you took, which choices you made and why, and of course how much time you spent on it. So please make note of this, because we would like to give you substantive feedback on how you made the report/dashboard.

BUSINESS CASE - TECHIONISTA HOLIDAYS

Presenting

Presenting

You will have to present your results in a short pitch of 5 minutes on the 2nd of June 2022 between 1:00-5:00 pm. Your presentation will be 10 minutes in total:

- the first 5 minutes you present your results: go over your visualizations, give a short demonstration of the report/dashboard and explain your findings;
- the second 5 minutes you will answer questions from Techionista and receive feedback.

After all groups have presented their results, there is a short break. After the break, we will give each group 10 minutes to receive questions and feedback from fellow students.

Your audience

Your presentation should be aimed at end-users of the report/dashboard. They don't look at how it was made but look at how it looks and if it is functional.

Content-wise Techionista will give you feedback on how you made your report/dashboard at a later moment after you have submitted it for evaluation.



Try to have fun, and good luck!