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#GLOBALAZURE ITALY 2021

A LAP AROUND AZURE AI

ANDREA SALTARELLO

@ANDYSAL74

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managed/designs

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- 30 Days to learn it: aka.ms/global-azure/30D2L
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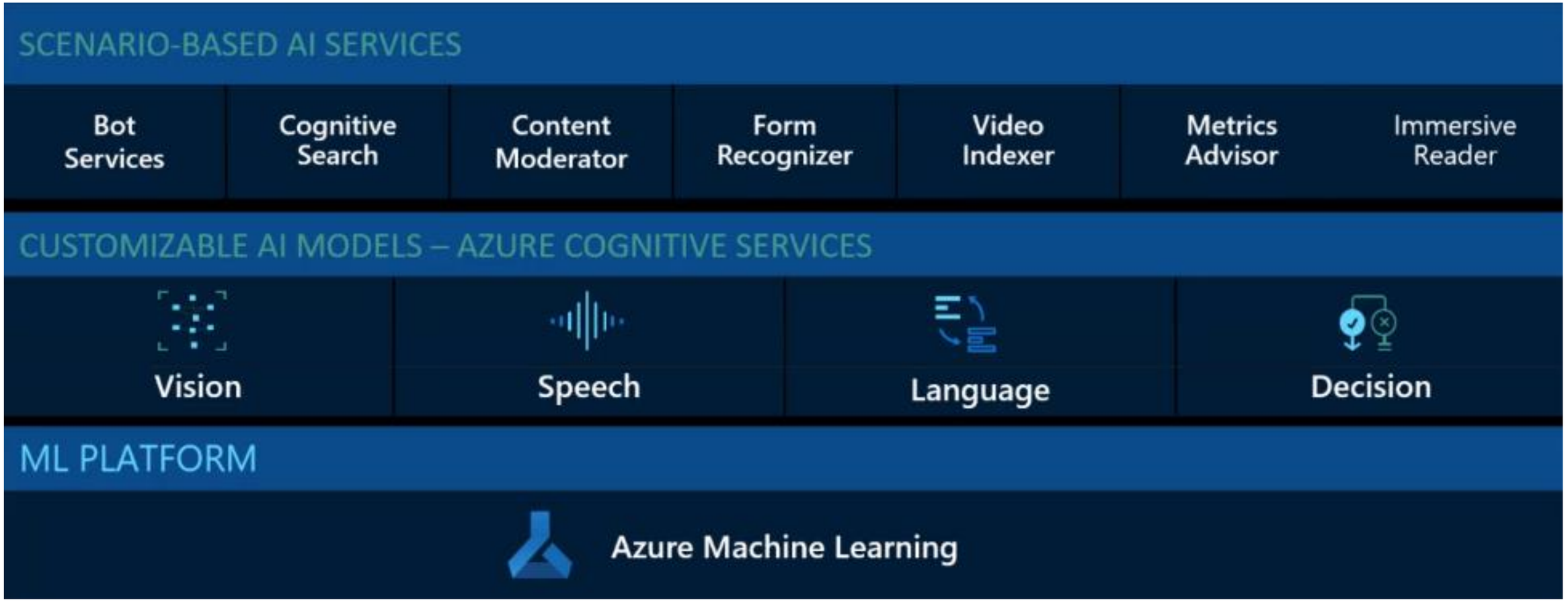
AZURE AI


SCENARIO-BASED AI SERVICES
Bot Services
Cognitive Search
Content Moderator
Form Recognizer
Video Indexer
Metrics Advisor
Immersive Reader
CUSTOMIZABLE AI MODELS – AZURE COGNITIVE SERVICES
Vision
Speech
Language
Decision
ML PLATFORM
Azure Machine Learning

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Azure Machine Learning Service

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AZURE ML

A cloud-based machine learning service capable of executing models based on a variety of frameworks.

Models are managed via **Azure ML Studio**

- Build new models with a designer
- Create models out of templates
- Import models based on known libraries (**ML.NET**, **TensorFlow**, **PyTorch**, **ONNX**, …)
- Create models via **AutomatedML**

The service is free, but training and predictions are billed on a *per compute* basis

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AZURE COGNITIVE SERVICES

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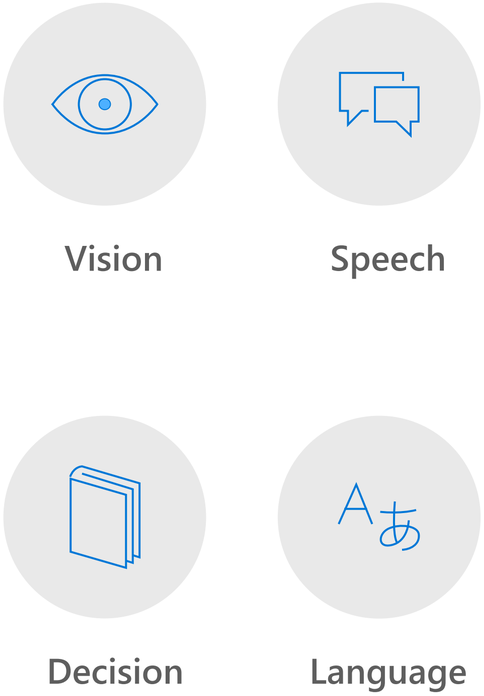
COGNITIVE SERVICES

1-2-3

1. Provisioning, either by code or via the Azure's dashboard, choosing a pricing tier
2. (Optional) App-specific training
3. Consumption



COGNITIVE SERVICES

CONSUMPTION

All Azure Cognitive Services are accessible via a built-in HTTP-based API, on top of which native SDKs are available for:

- .NET
- Go
- Java
- Node.js
- Python

To consume a cognitive service instance, we need its url (a.k.a. **endpoint**) and password (a.k.a. **key**): both can be found in their dashboard

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TEXT ANALYTICS

A Cognitive Service providing an easy way to parse natural language to:

- Detect language
- Perform sentiment analysis
- Extract key phrases
- Detect entities
- Extract personally identifiable information

SENTIMENT ANALYSIS

Sentiment Analysis applies sentiment labels to text, which are returned at a sentence and document level, with a confidence score for each. The labels are *positive*, *negative*, and *neutral*. At the document level, the mixed sentiment label also can be returned.

Sentence sentiment	Returned document label
At least one positive sentence is in the document. The rest of the sentences are neutral.	positive
At least one negative sentence is in the document. The rest of the sentences are neutral.	negative
At least one negative sentence and at least one positive sentence are in the document.	mixed
All sentences in the document are neutral.	neutral

The sentiment of the document is determined below:

COMPUTER VISION

A Cognitive Service that provides a way to analyze images looking for:

- A summary
- Brands
- Faces
- People
- Objects
- (Handwritten) Text

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~~AVENGERS~~COGNITIVE SERVICES: ASSEMBLE!

Cognitive Services are usually meshed to build end-user features. Let's have a look at an app by which:

- The **Speech** service is used to do Speech-to-Text
- The **TextAnalytics** service is used to guess the language
- The **Language Understanding** service is used to guess the user's intent
- The **Computer Vision** service is used to resolve the user intent against the provided image
- The **Speech** service is used to provide the user an audible answer

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ROSSY

HTTPS://GITHUB.COM/ANDYSAL/ROSSY

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GRAZIE!

andysal@gmail.com
https://www.facebook.com/saltarelloandrea
https://github.com/andysal
https://www.linkedin.com/in/andysal/
https://twitter.com/andysal74

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