

Dashboarding e Data Visualization con il linguaggio naturale

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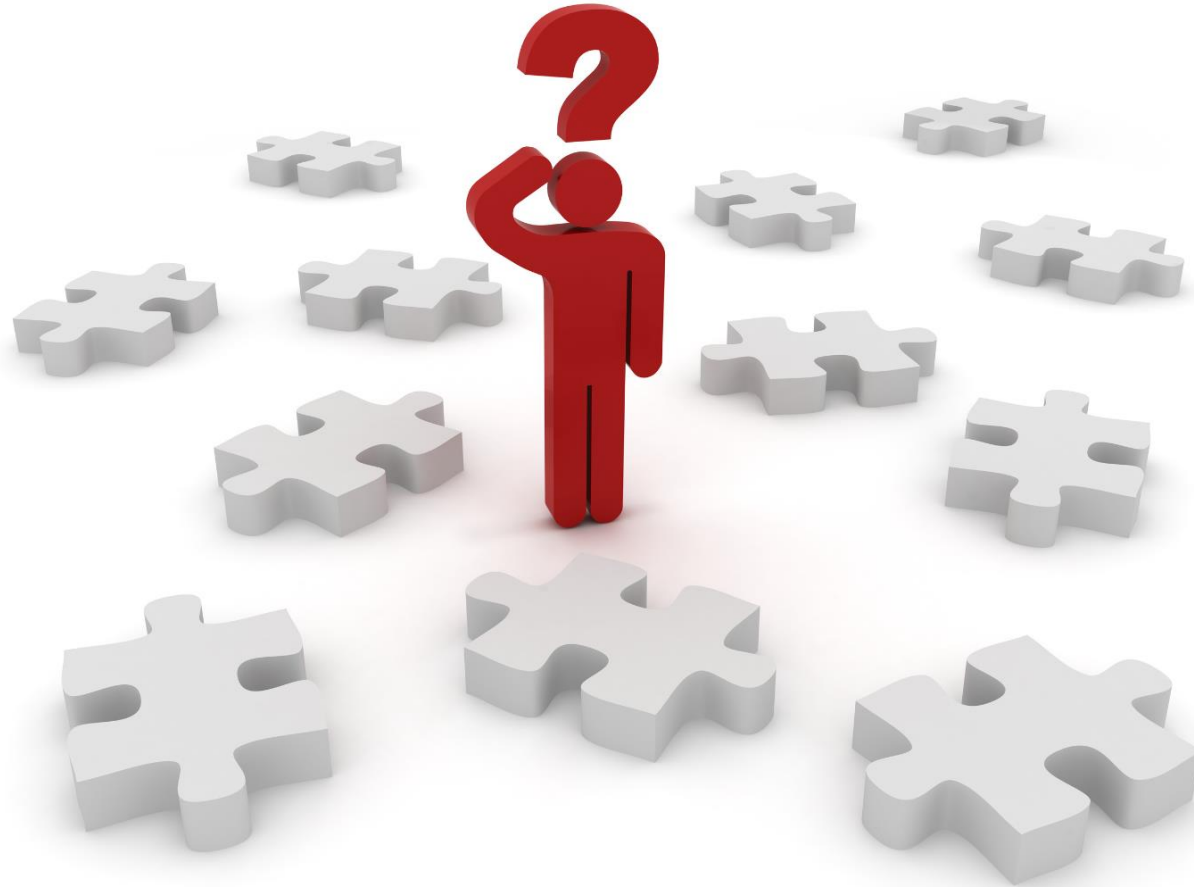


Come è nata l'idea



— blexin.
IT'S EASY WITH US

Estrarre i dati necessari a prendere una decisione richiede tempo



Negli scenari medio grandi ci sono prodotti consolidati



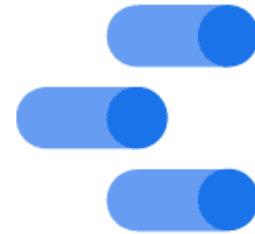
Power BI



holistics



Looker



Google
Data Studio



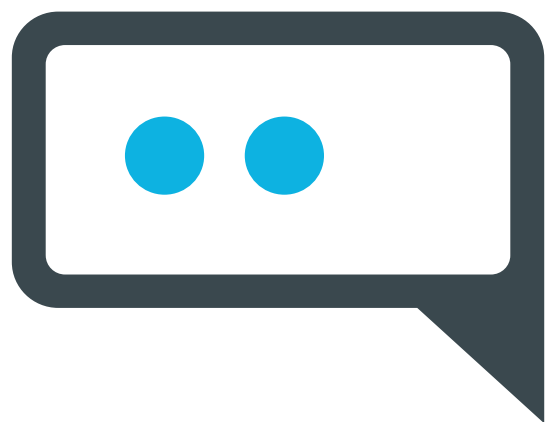
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WHAT DO YOU NEED?

Cosa volevo ottenere?

1. Nessuna preparazione di **report**
2. Nessun **linguaggio** di interrogazione dati
3. Utilizzo del **linguaggio naturale**
4. Poter **salvare il risultato**
5. Poter **rappresentare graficamente** il dato
6. Poter **condividere** i risultati ottenuti

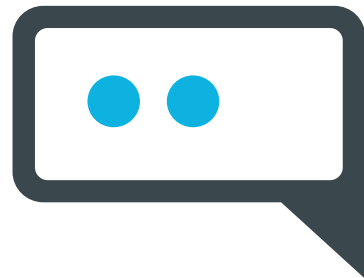


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WHAT DO YOU NEED?

Che cos'è Elly?

Elly è una piattaforma per l'**accesso**, la **manipolazione**, la **visualizzazione** e la **condivisione di dati aziendali** utilizzando una **User eXperience** basata sul **riconoscimento del linguaggio naturale**

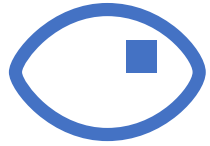


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WHAT DO YOU NEED?

Cosa mi serve?

1. Attivazione vocale
2. Testo a partire da audio
3. Audio a partire da testo
4. Compresione del testo
5. Gestione della conversazione
6. Personalizzazione del dominio

Cognitive Services



Vision

Video Indexer
Computer Vision
Face
Custom Vision
Form Recognizer
Ink Recognizer



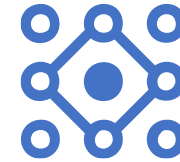
Speech

Speaker Recognition
Speech Services



Language

Text Analytics
Bing Spell Check
Translator Text
QnA Maker
Language Understanding (LUIS)



Decision

Anomaly Detector
Content Decision
Personalizer



Search

Bing Entity Search
Bing Autosuggest
Bing Web Search
Bing Visual Search
Bing Video Search
Bing Custom Search
Bing News Search
Bing Image Search

Cognitive Services

{ **REST:API** }



- REST API
- SDK Client Library
- WebSocket
- Speech Device SDK

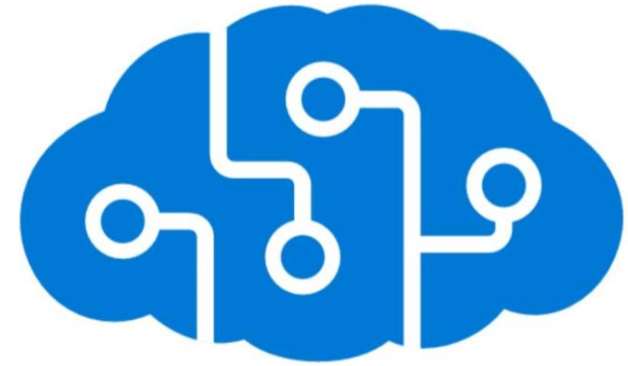
Attivazione vocale

- Ci permette di **svegliare** la nostra applicazione con la voce
- E' un sistema **familiare**, basti pensare ad Alexa, Siri, Ok Google, Cortana
- Necessario un modello **accurato** al fine di garantire un'esperienza d'uso soddisfacente
 - Falsi positivi
 - Falsi negativi



Speech Services Keyword Recognition

- Campioni audio non necessari
- **SDK disponibile** in C#, Python, Objective-C/Swift
- Al momento disponibile solo in **Inglese** e **Cinese**
- Due modalità di creazione, **Basic (15min)** e **Advanced (48h)**
- **Ottimizza modello:** + falsi positivi o + falsi negativi?



Speech Services Keyword Recognition

New project

Name *

Okay Computer

Description

Describe your project

Language *

English (United States)

Name and keyword

Name *

Okay Computer

Description

Describe your model

Keyword *

Okay computer

Consider the following guidelines when choosing your keyword:
The word should be 4 characters long.
Do not choose words that are too common or too similar to special characters, symbols, or punctuation.

Choose model type

Choose between two model types:
Basic - Designed for quick setup and deployment.
Advanced - Designed for higher accuracy and more complex keywords.

Model type *

Basic

Basic

Advanced

Select pronunciations

Select all pronunciations for your keyword.
Note: Choosing multiple pronunciations can lead to higher accuracy.

☒ ☒

Models can be tuned for three different configurations:
Default - Optimized for a balance between correct accept rates and false accept rates.
Higher correct accepts - Optimized for higher correct accept rates, which can result in higher false accept rates.
Lower false accepts - Optimized for lower false accept rates, which can result in lower correct accept rates.

Choose your configuration below and click Download to get a model file that can be used with the Speech SDK.

Note: If you only see Default as an option below, try recreating your model.

Choose a model

Okay computer (ok compu ...

Configuration

Default

Download

Speech Services

- **Speech-to-Text:** convertire audio in testo
- **Text-to-Speech:** convertire testo in audio
- **Speaker Recognition:** riconoscere chi sta parlando
- **Speech Translation:** tradurre in real-time il parlato
- **Modelli personalizzabili**

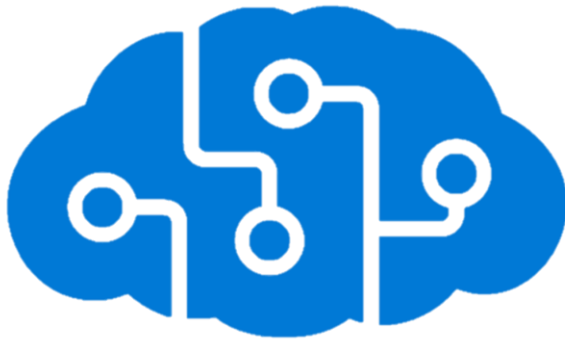


Speech Services

- **75+** voci e **45+** lingue
- Voce **maschile** e **femminile**
- **Standard vs Neural**
 - velocità, volume, pronuncia, pause (SSML)
- Creare una **voce Custom**



Natural Language Understanding

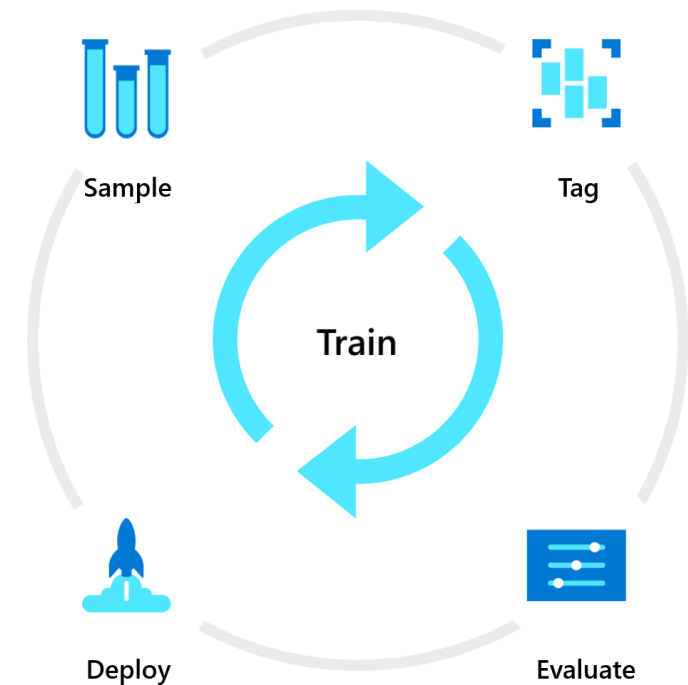


Language Understanding Intelligent Service (LUIS):

- **Utterance:** Prenota un volo per Londra
- **Intent:** BookFlight
- **Entity:** Londra
- **Active Learning** per migliorare la propria comprensione

Conversational Language Understanding

- L'evoluzione di LUIS
- Pensato per applicazioni **multi-lingua**
- **Retrocompatibile** con applicazioni LUIS, ma mancano alcuni tipi (come i pattern)



Conversational Language Understanding

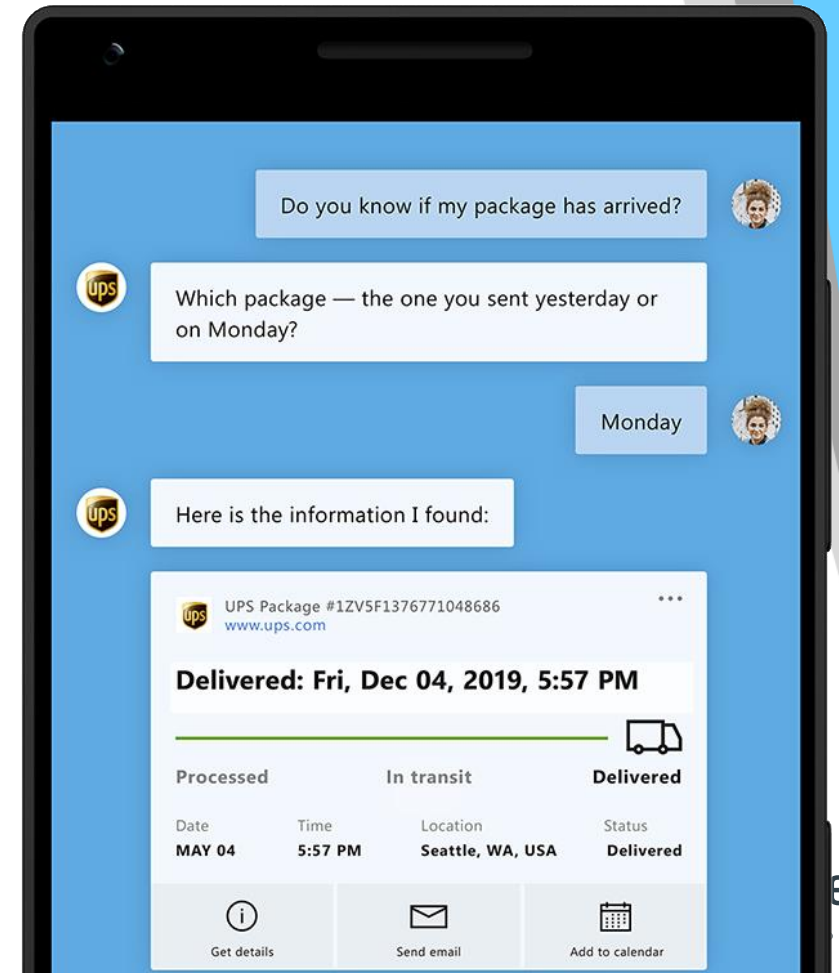
	Conversational language understanding	Language Understanding (LUIS) Learn more
Transformer-based, state-of-the-art models	✓	
Train in one natural language and use the model in multiple languages without retraining	✓	
Orchestrate between multiple language application	✓	
Interoperable with Bot Framework SDK	✓	✓
Interoperable with Bot Framework Composer		✓
Run on premises or at the edge with containers		✓
Annotate, train, evaluate, and deploy models with language studio	Language Studio	LUIS.ai

<https://docs.microsoft.com/en-us/azure/cognitive-services/language-service/concepts/migrate>

Gestire la conversazione

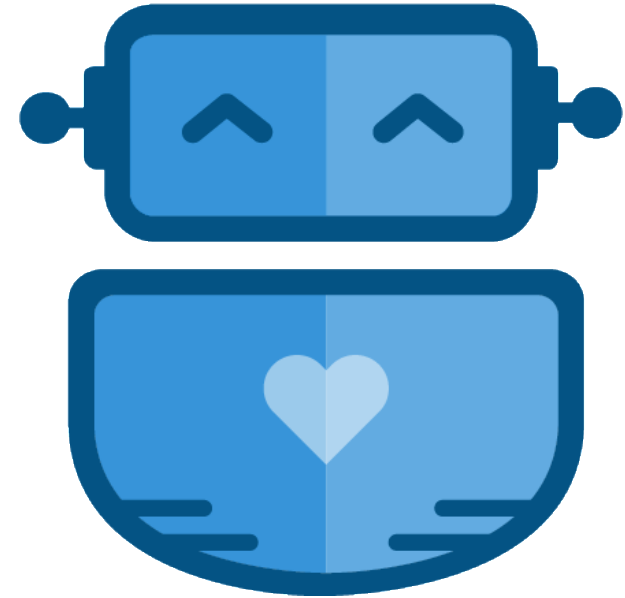
Un **BOT** è un moderna tipologia di **interazione uomo-macchina**:

- Usate per attività **semplici e ripetitive**
- Permettono di **automatizzare** parte dei **processi** applicativi
- Possono rispondere a **singole domande** o instaurare veri e propri **dialoghi**
- Integrabili in **servizi di chat** (Facebook, LinkedIn, Slack, Teams, ecc.)



Microsoft BOT Framework


- Ogni **comunicazione verso e dal BOT** viene chiamata **Activity** (es. **Message**, **Reaction**, **EndOfConversation**, **Custom**)
- Una Activity iniziata dall'utente e la relativa risposta del BOT viene chiamata **TURNO**.
- Le informazioni relative al turno vengono fornite con il **TurnContext**, attraverso il quale è possibile gestire la conversazione.









Elly in azione









Elly in azione

 **Dashboard**



Mario Rossi
Ellycode Srl 

Dipendenti     


Id	Nome	Email	Data assunzione	Ferie	Salario annuo	Data fine rapporto
1	Noreen Click	nclick0@storify.com	21/03/2019 00:00:00	true	1360.29	26/06/2021 00:00:00
2	Reeta Stut	rstut1@oracle.com	13/02/2021 00:00:00	true	2705.88	24/02/2022 00:00:00
3	Shelby Brodest	sbrodest2@unblog.fr	26/02/2022 00:00:00	true	2325.08	17/06/2021 00:00:00
4	Frannie Whyler	fwhyler3@fema.gov	13/05/2020 00:00:00	false	1255.82	11/10/2021 00:00:00
5	Nikkie Kinge	nkinge4@ihg.com	19/03/2019 00:00:00	false	2709.81	07/11/2021 00:00:00
6	Aluin McGunley	amcgunley5@cbslocal.com	21/11/2017 00:00:00	false	1841.36	
7	Oliy Anney	oanney6@symantec.com	30/01/2018 00:00:00	true	1643.66	09/11/2021 00:00:00
8	Giraldo Theodoris	gtheodoris7@istockphoto.com	25/10/2020 00:00:00	false	1278.67	01/09/2021 00:00:00
9	Doti O'Shesnan	doshesnan8@bravesites.com	02/12/2020 00:00:00	true	1815.18	06/10/2021 00:00:00
10	Beulah Willingam	bwillingam9@blogs.com	12/06/2021 00:00:00	false	1465.22	16/10/2021 00:00:00
11	Davie Fendlen	dfendlena@whitehouse.gov	22/12/2019 00:00:00	true	2824.16	28/06/2021 00:00:00


 **1**     







Risultati: 2000



Elly in azione

 **Dashboard**



Mario Rossi
Ellycode Srl 

Dipendenti      

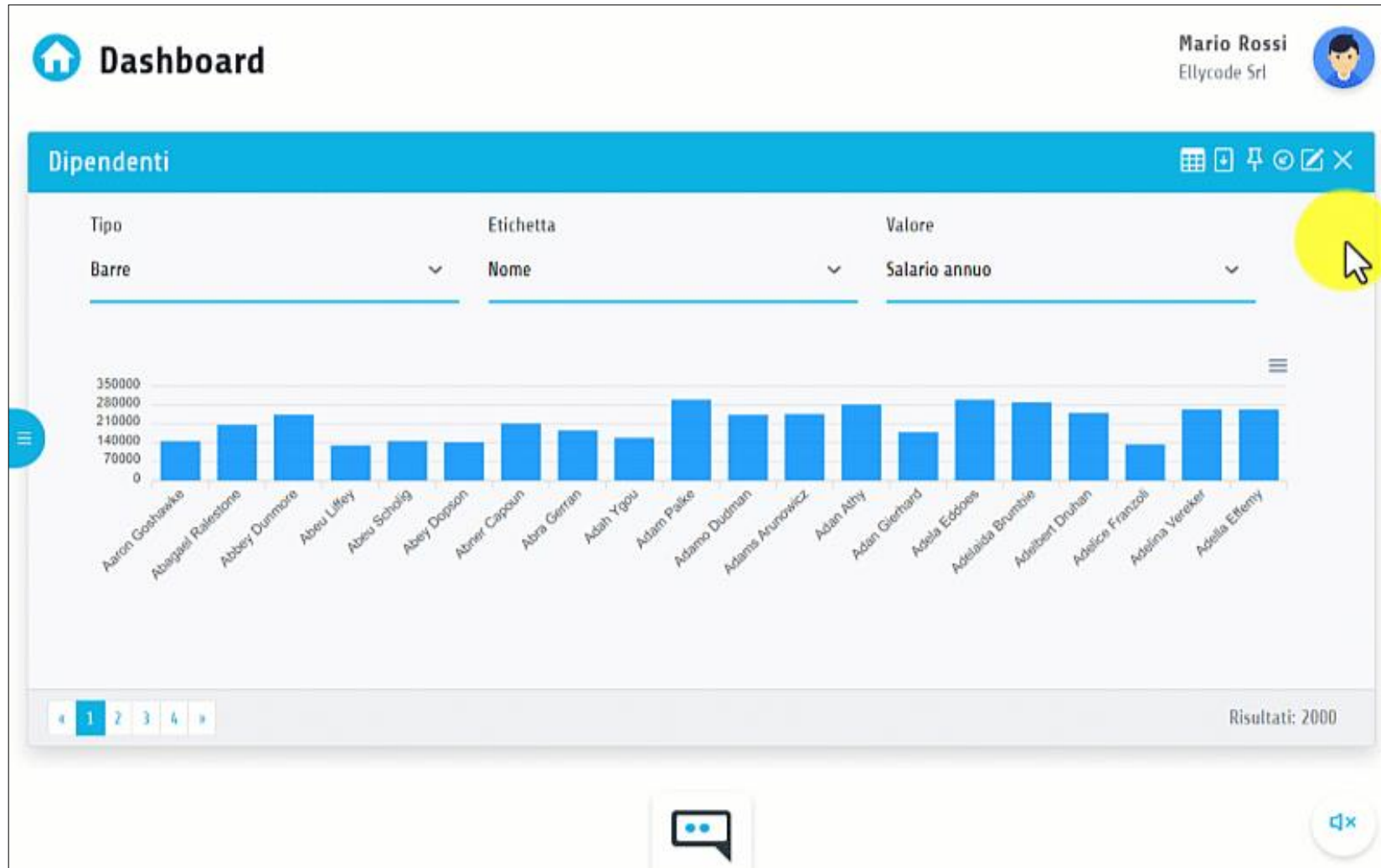
Id	Nome	Email	Data assunzione	Ferie	Salario annuo	Data fine rapporto
1552	Aaron Goshawke	agoshawkefb@google.cn	26/01/2022 00:00:00	false	1453.27	26/02/2022 00:00:00
222	Abagael Ralestone	aralestone65@uiuc.edu	02/11/2020 00:00:00	false	2064.41	27/01/2022 00:00:00
1087	Abbey Dunmore	adunmore2e@devhub.com	17/04/2020 00:00:00	true	2444.59	14/11/2021 00:00:00
1446	Abeu Liffey	aliffeycd@businesswire.com	03/04/2019 00:00:00	false	1302.38	26/09/2021 00:00:00
1503	Abeu Scholig	ascholigdy@fotki.com	18/12/2021 00:00:00	false	1459.88	13/08/2021 00:00:00
1100	Abey Dopson	adopson2r@taobao.com	22/12/2018 00:00:00	true	1418.46	13/01/2022 00:00:00
1071	Abner Capoun	acapounly@fda.gov	03/07/2018 00:00:00	true	2113.15	06/08/2021 00:00:00
210	Abra Gerran	agerran5t@princeton.edu	14/03/2018 00:00:00	true	1861.99	
779	Adah Ygou	aygoulm@state.gov	21/09/2017 00:00:00	false	1582.65	29/06/2021 00:00:00
491	Adam Palke	apalkedm@flickr.com	15/12/2018 00:00:00	false	2999.88	
417	Adamo Dudman	adudmanbk@blog.com	09/12/2018 00:00:00	false	2437.77	11/10/2021 00:00:00

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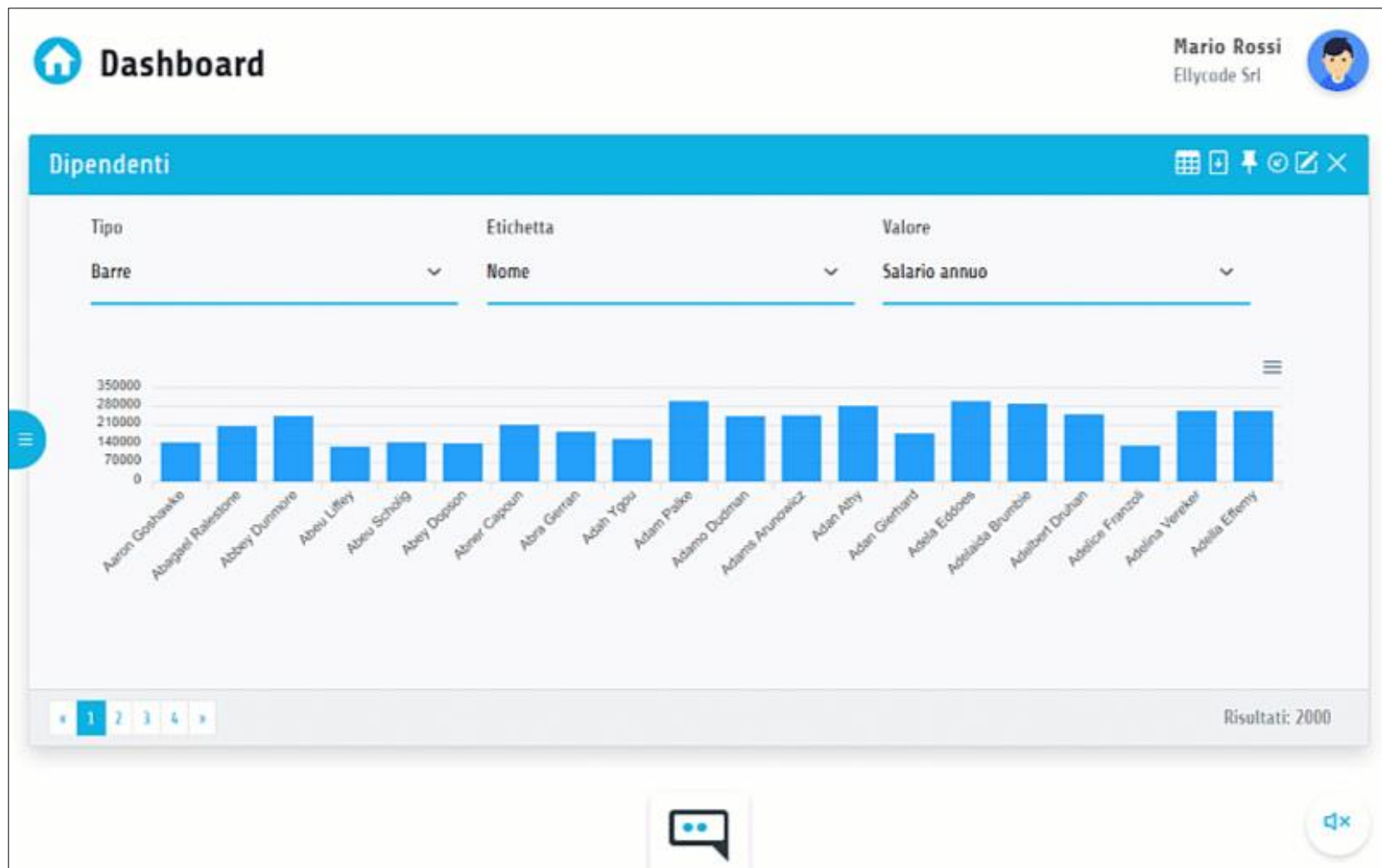
Risultati: 2000

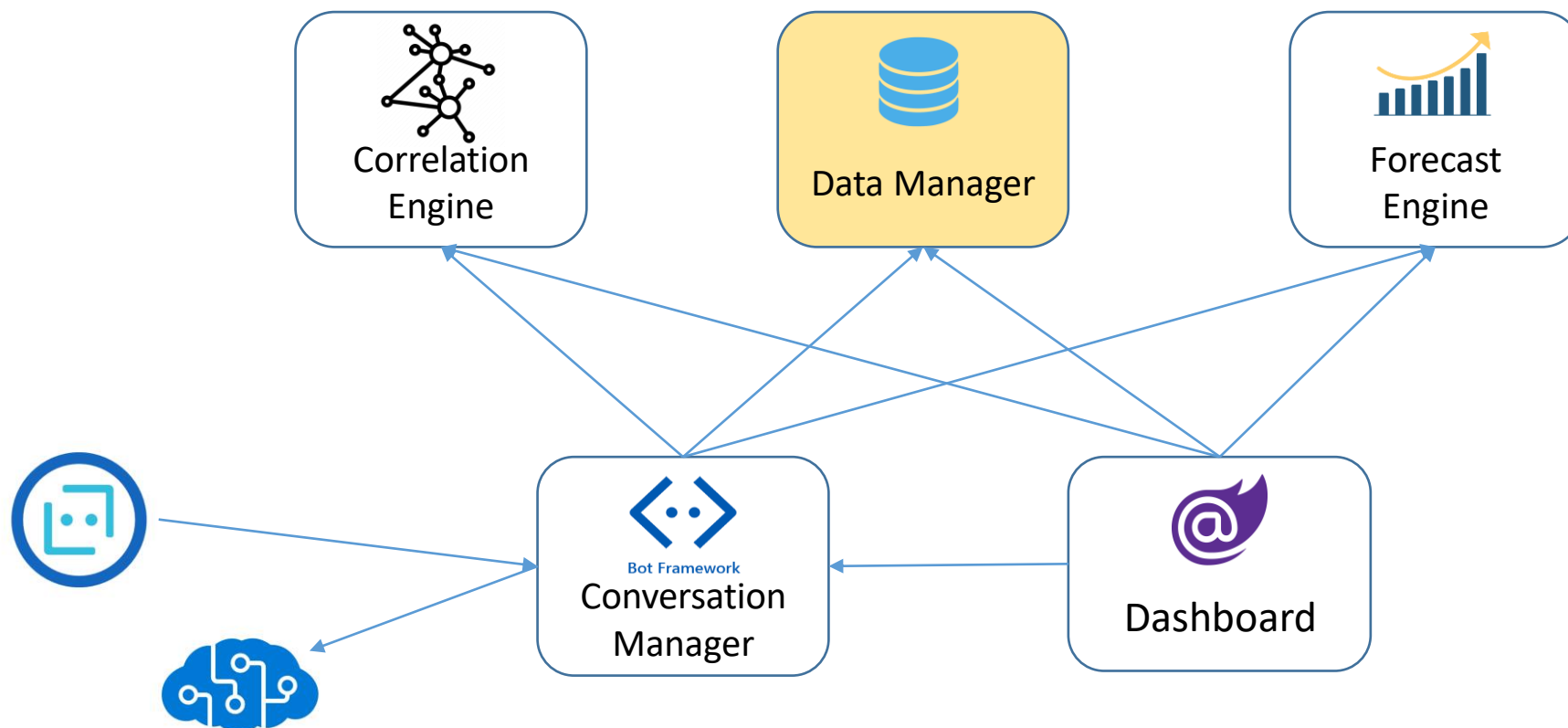
Elly in azione



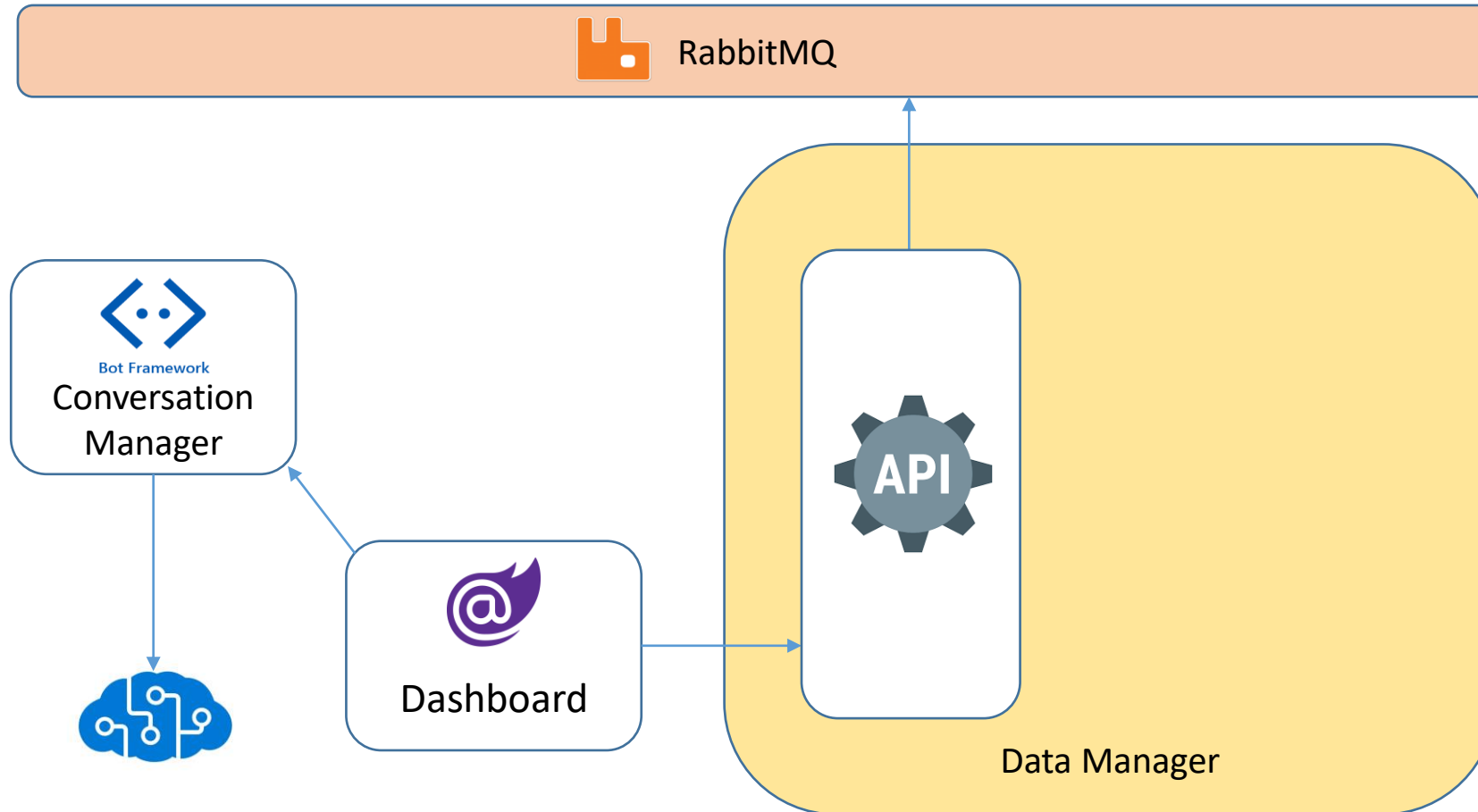
Elly in azione



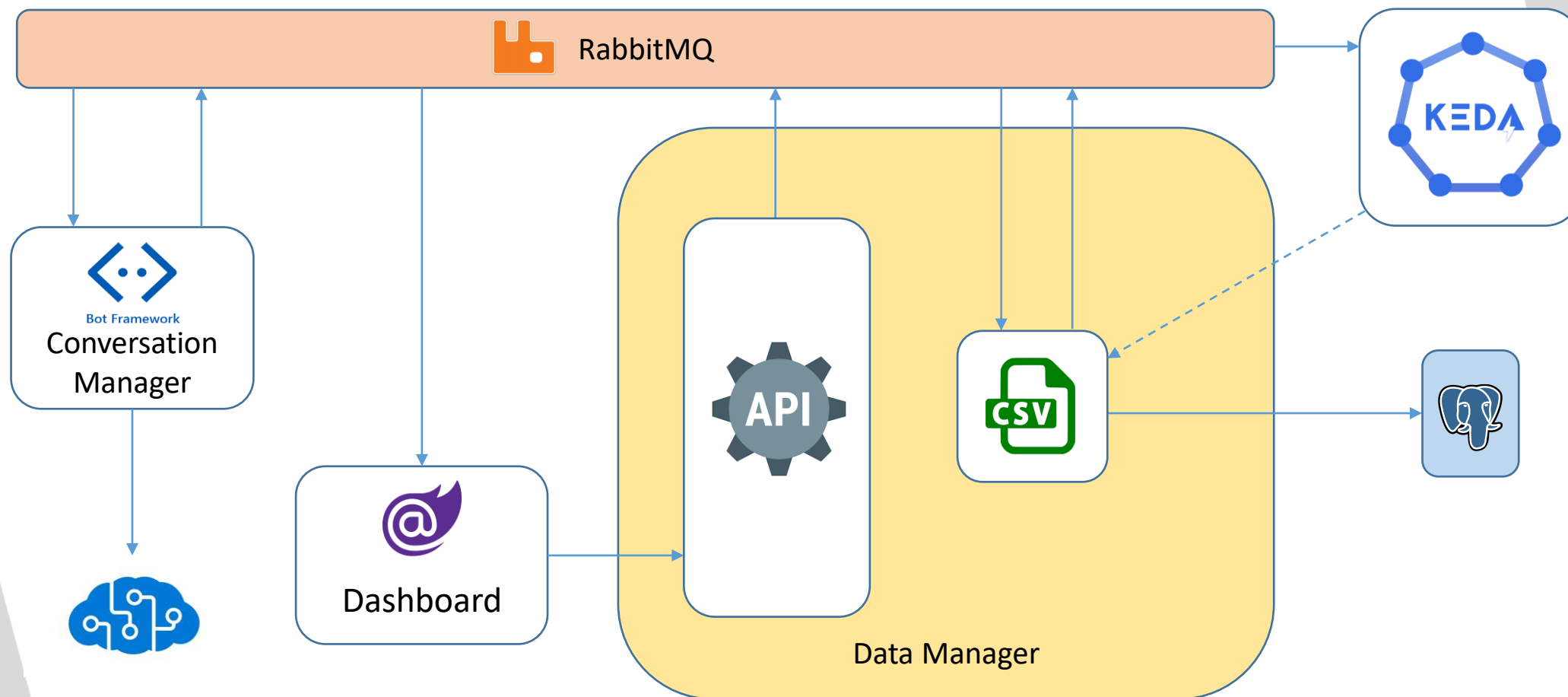
Cosa c'è dietro le quinte...



Aggiornamento dei dati



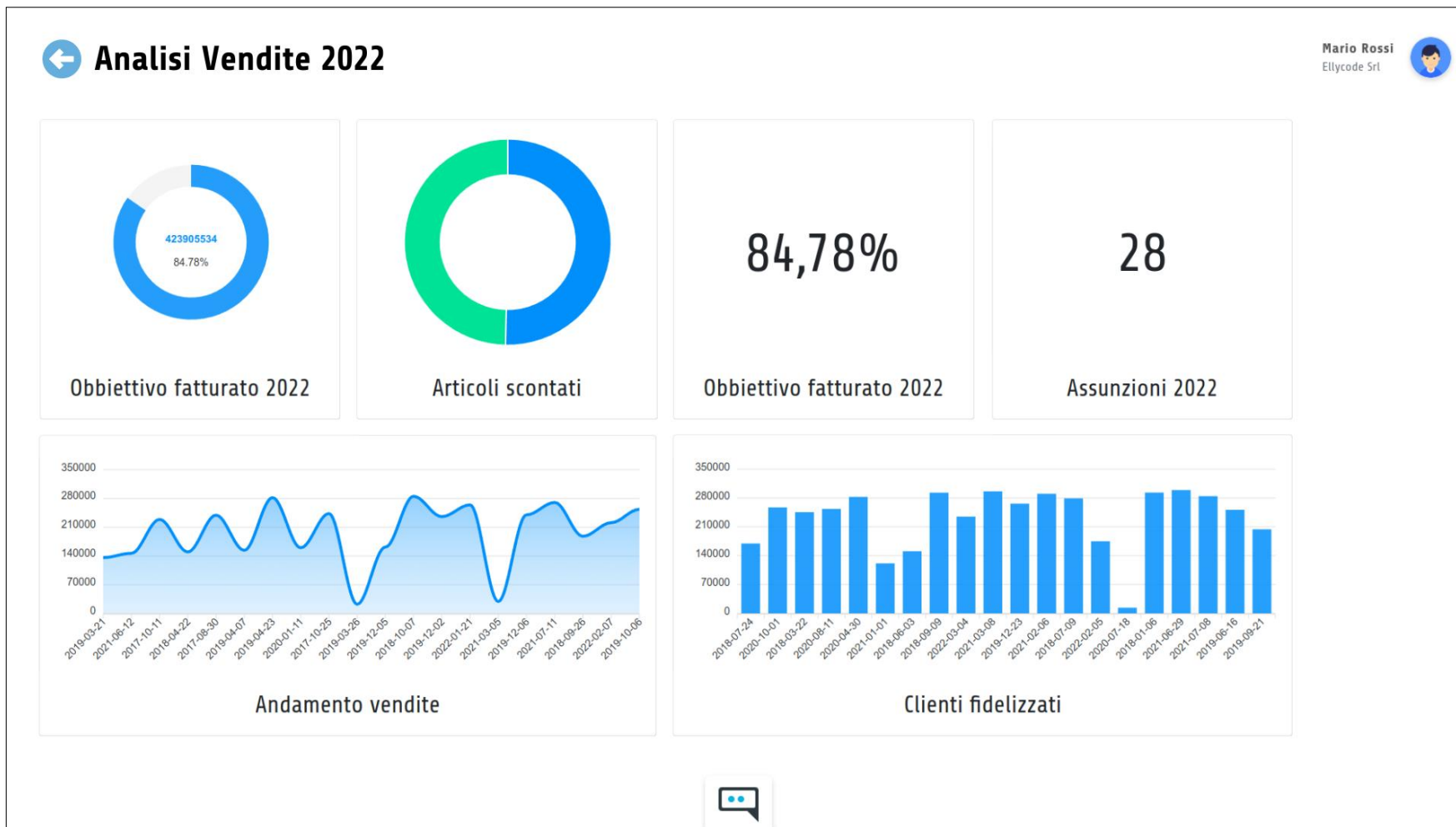
Aggiornamento dei dati



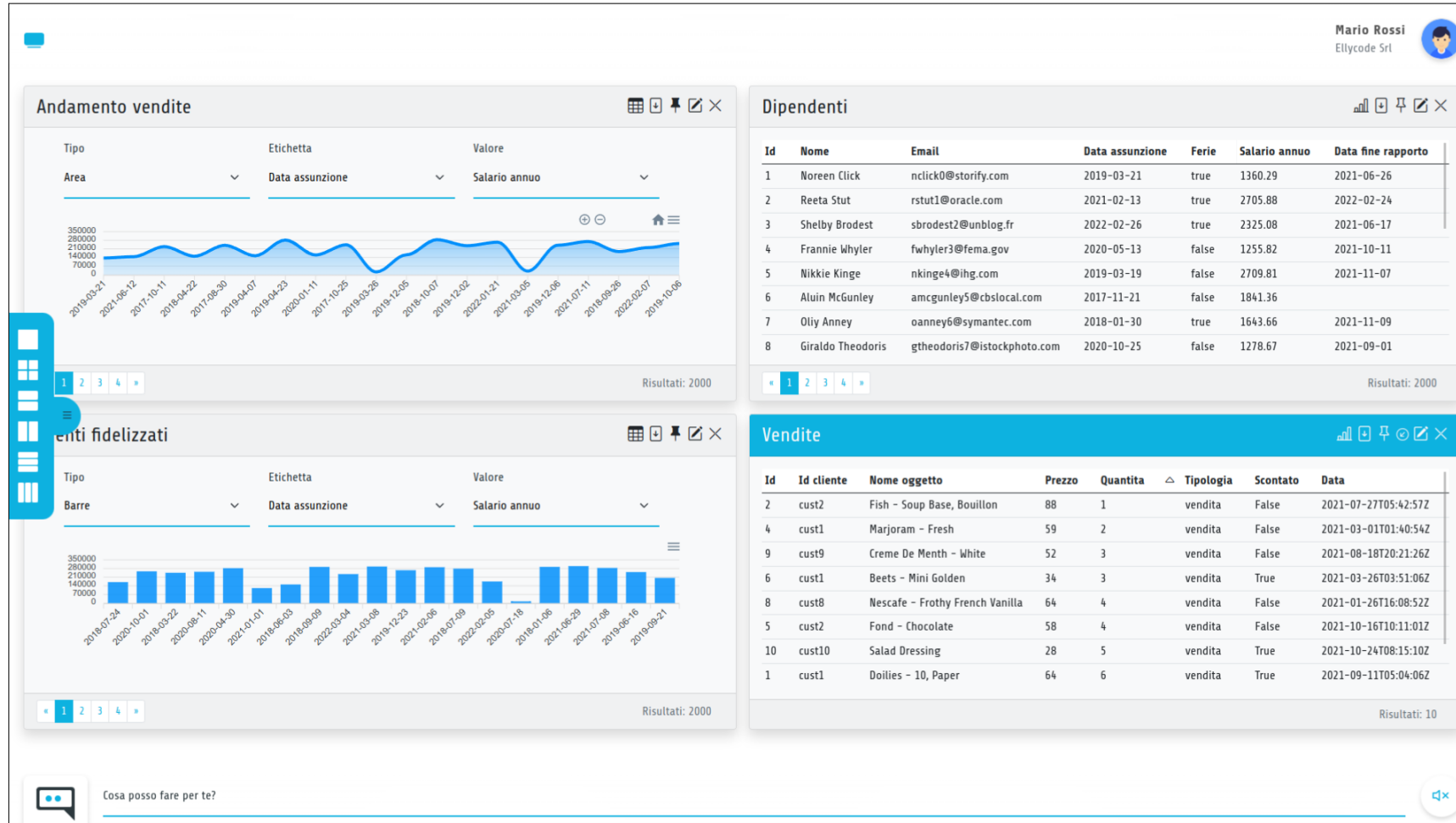
DEMO

Accesso ai dati con il linguaggio naturale

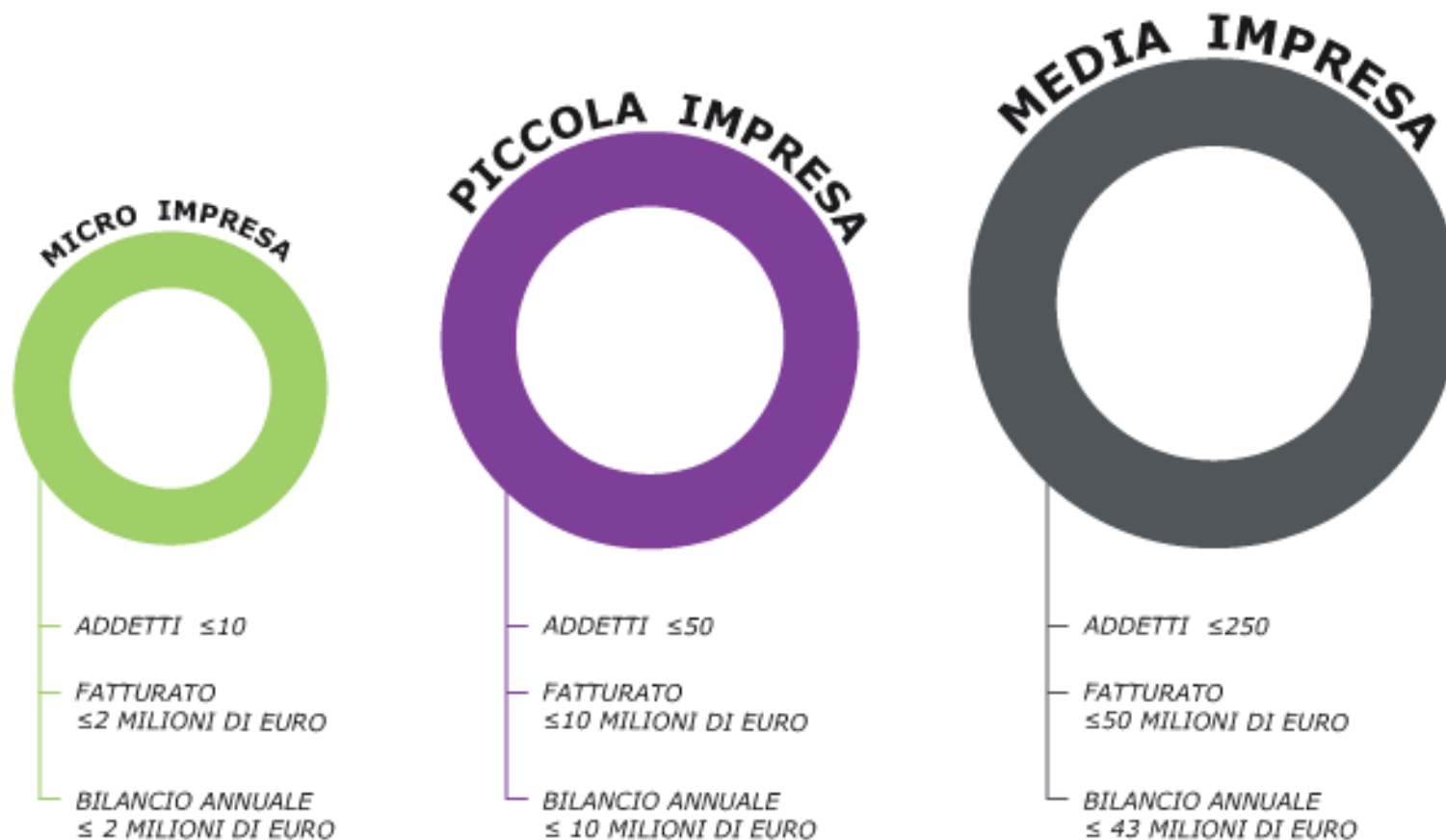
Dashboarding e Data Visualization



Dashboarding e Data Visualization



A chi è destinato?



In questo scenario chi è il nostro utente?



Manager o Responsabile

A chi è destinato?



Software House

Modello di distribuzione



Modello di distribuzione



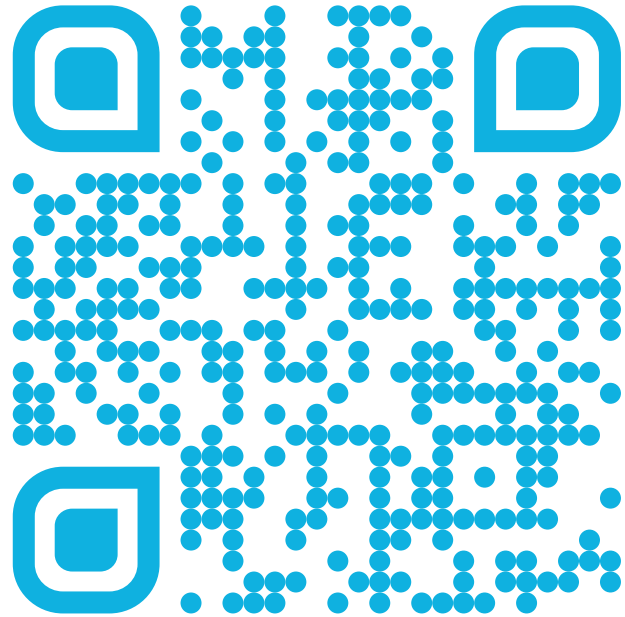
CLOUD



ON-PREMISE

Su richiesta possiamo installarlo **on premise**,
su **cloud privati** o in **scenari ibridi**

Attualmente siamo in beta privata



- Accesso **gratuito** alla piattaforma
- Integrazioni **gratuite** con i dati aziendali
- Dopo il **lancio del 6 Febbraio 2023**, accesso gratuito per un anno
- **Prezzo scontato** per gli utenti aggiuntivi

Chiediamo in cambio di poter **analizzare l'uso della piattaforma** (non i dati) e che forniate **il vostro feedback**

Il nostro Team



Cosa bolle in pentola?



Domande? Dubbi? Curiosità?



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