

Virtuoso Infotech Pvt. Ltd.



About Virtuoso Infotech

- Fastest growing start-up firm; Offers the flexibility of a small firm and robustness of over 30 years experience collectively within the leadership team
- Technology expertise & passionate team
- Successful client engagements across India, USA, UK, Australia and Argentina
- Handle enterprise solutions that involve **30,000 active users**, more than 20 servers, **data volume as big as 5 million entries per day**

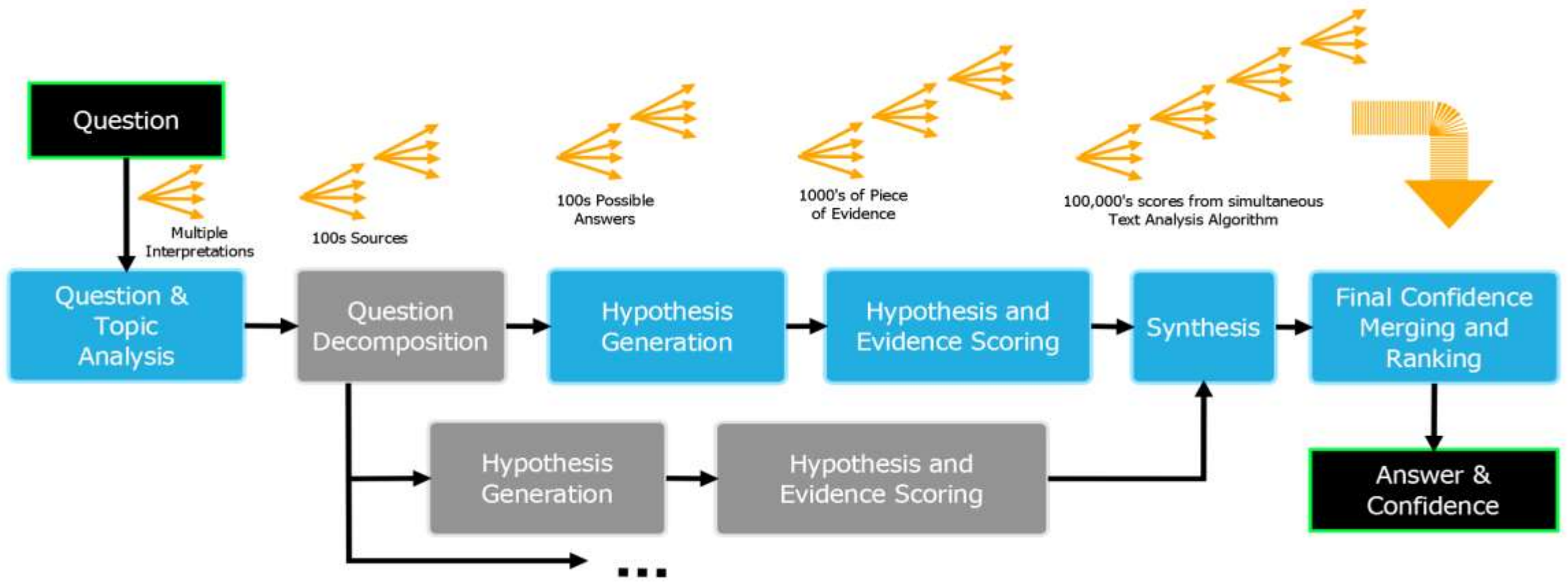
Agenda

- What is IBM Watson?
- How Watson works?
- Services provides by Watson.
- Introduction to Conversation service.
- How to create our own bot ?

What is IBM Watson?

- **Watson** is an **IBM** supercomputer that combines artificial intelligence (AI) and sophisticated analytical software for optimal performance as a “question answering” machine.
- Project started in 2007, lead David Ferrucci.
- The supercomputer is named for **IBM's** founder, Thomas J. **Watson**.
- Goal was to make an expert system which can process natural language faster than human in real time.

How Watson works?



Services

- **Conversation** : Watson Conversation combines a number of cognitive techniques to help you build and train a bot - defining intents and entities and crafting dialog to simulate conversation.

Eg : <https://conversation-demo.mybluemix.net/>

- **Alchemy Language** : It is a collection of natural language processing APIs that can help you to understand sentiment, keywords, entities, high-level concepts and more.

Eg : <https://alchemy-language-demo.mybluemix.net/>

- **Personality Insights** : Personality Insights extracts and analyzes a spectrum of personality attributes to help discover actionable insights about people and entities, and in turn guides end users to highly personalized interactions.

Eg : <https://personality-insights-livedemo.mybluemix.net/>

Continue..

- **Retrieve and Rank** :This service helps users find the most relevant information for their query by using a combination of search and machine learning algorithms to detect "signals" in the data.

Eg : <http://retrieve-and-rank-demo.mybluemix.net/rnr-demo/dist/#/>

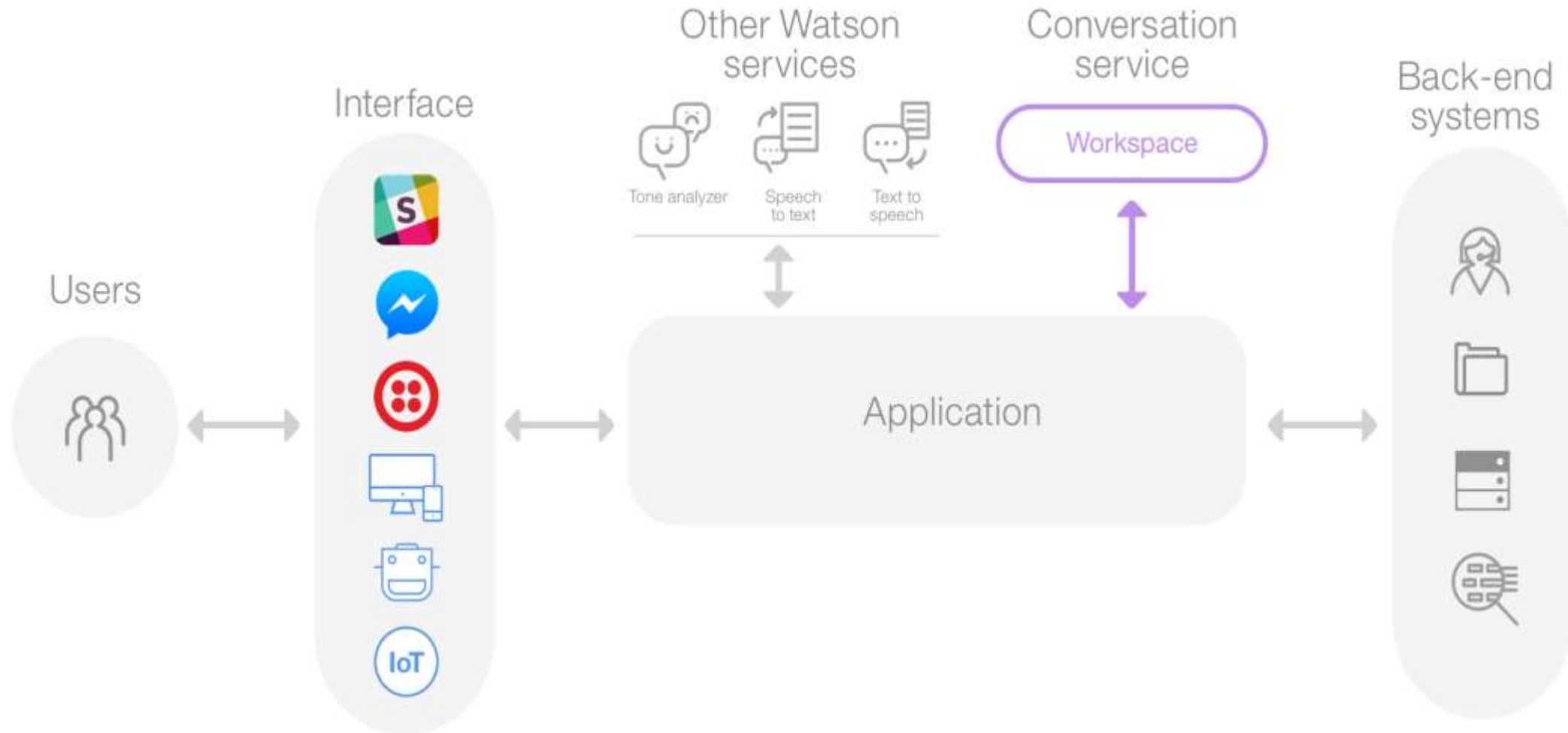
- **Tone Analyzer**: The IBM Watson™ Tone Analyzer Service uses linguistic analysis to detect three types of tones from text: emotion, social tendencies, and language style.

Eg : <https://tone-analyzer-demo.mybluemix.net/>

- **Visual Recognition** : Visual Recognition allows users to understand the contents of an image or video frame, answering the question: “What is in this image?” Submit an image, and the service returns scores for relevant classifiers representing things such as objects, events and settings.

Eg: <https://visual-recognition-demo.mybluemix.net/>

Conversation Service



How to create our own bot?

➤ Steps:

- 1) Create Account on Blue mix.
- 2) Choose conversation service.
- 3) Create workspace.
- 4) Create Intents.
- 5) Create Entities.
- 6) Create Dialog.

Defining Intents

- An *intent* represents the purpose of a user's input, such as a question about business locations or a bill payment. You define an intent for each type of user request you want your application to support.



Defining Entities

- An *entity* represents a term or object that is relevant to your intents and that provides a specific context for an intent. For example, an entity might represent a city where the user wants to find a business location, or the amount of a bill payment.

The screenshot shows a dialog box for defining an entity. At the top left, the entity name is `@menu_item`. In the top right corner, there is a green "Create" button and a close "X" icon. The main area is divided into two sections: "Value" and "Synonyms".

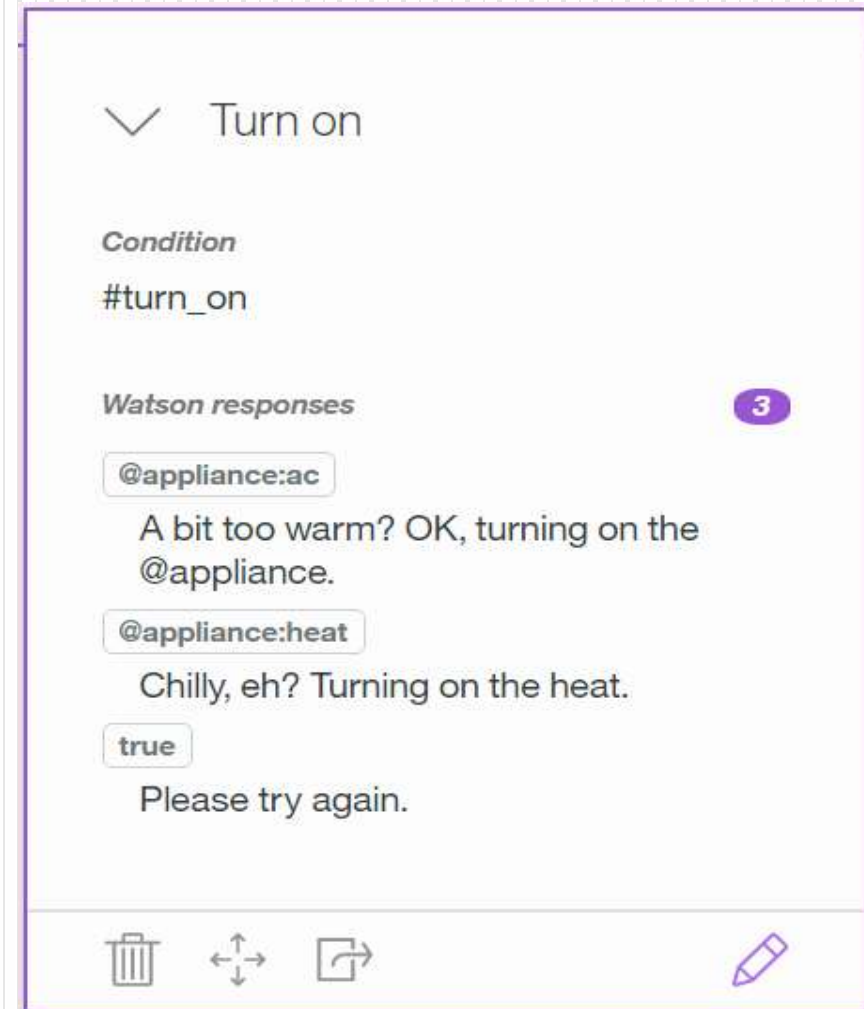
Value: A text input field containing the word "sandwich".

Synonyms: A list of input fields. The first two contain "hoagie" and "sub", each with a green "X" icon to its right. Below them is an input field with the placeholder text "Add synonyms...". To the right of the "sub" field is a green "+" icon.

Below the "Value" field, the text "French fries" is visible. To its right, there is a separate input field containing the word "fries".

Defining Dialog

➤ A *dialog* is a branching conversation flow that defines how your application responds when it recognizes the defined intents and entities. You use the dialog builder to create conversations with users, providing responses based on the intents and entities that you recognize in their input.



The screenshot shows a dialog builder interface for a 'Turn on' intent. At the top, there is a dropdown arrow and the text 'Turn on'. Below this, the 'Condition' is set to '#turn_on'. Under the 'Watson responses' section, there are three response rules:

- @appliance:ac**: A bit too warm? OK, turning on the @appliance.
- @appliance:heat**: Chilly, eh? Turning on the heat.
- true**: Please try again.

A purple circle with the number '3' is located to the right of the 'Watson responses' section. At the bottom of the interface, there are icons for deleting, zooming, and sharing, along with a pencil icon for editing.

Thank You!

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