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تم إنشاء الوصف تلقائياً

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**Arabic Spoken Language Identification System**

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**Chapter 2: Literature Review**

**2.1 introduction(محمد ال عبدالهادي)**

In this chapter, the steps taken by the researcher in studying and selecting research samples and the principles he followed in applying the research in its practical framework are reviewed. And previous studies that are related to the research topic, which number four research

**2.2 application(محمد ال عبدالهادي)**

In this section, we will talk about the applications that apply the idea of ​​our applications, and we will explain each application and its features

**2.2.1 Soundhound(محمد ال عبدالهادي)**

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SoundHound: has applied audio processing and machine learning on millions of songs to extract features that are characteristic of each song.

The users of the application : are all those who are looking for the speaker in a particular music.

Features of the SoundHound App

* Immediately identifies the song.
* Extract words from audio) LiveLyrics( .
* Getting to know the Quran reciter but not well

Disadvantages of the SoundHound app

* Doesn't always play the correct song
* Has a slight learning curve.
* does not recognize the sound in Arabic well

The application works with natural language understanding technology.

**2.2.2 Shazam(إبراهيم السيف)**



**Definition of Shazam application:-**

Shazam is an application that can identify music, movies, TV shows and clips in general by taking a sample of the audio clip, and this is done using the device's microphone.

**Who are the users of the application-:?**

Users of the Shazam application are the ones who want to find the name of the music or audio track that was searched, the Shazam application allows them to find the name of the music or audio track that they want.

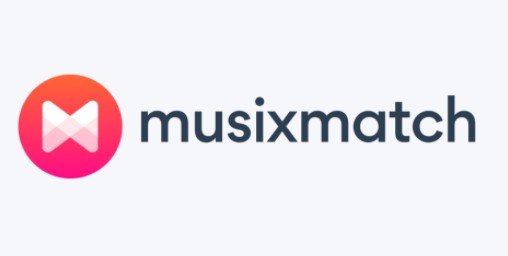
**Shazam application advantages and disadvantages:-**

* **Advantages:**
* easy to use.
* Easy to discover music.
* Recognizes the voice in ten second.
* **Disadvantages**:
* The user can not sing the song and search for it.
* It is not easy to recognize the reader.

**Technology used in Shazam application:-**

The Shazam application uses the microphone of the mobile phone or the device in which the application is located to identify the audio clip, and Shazam uses fingerprint technology to puts it in a graph through which the audio clip is fragmented and searched in databases.

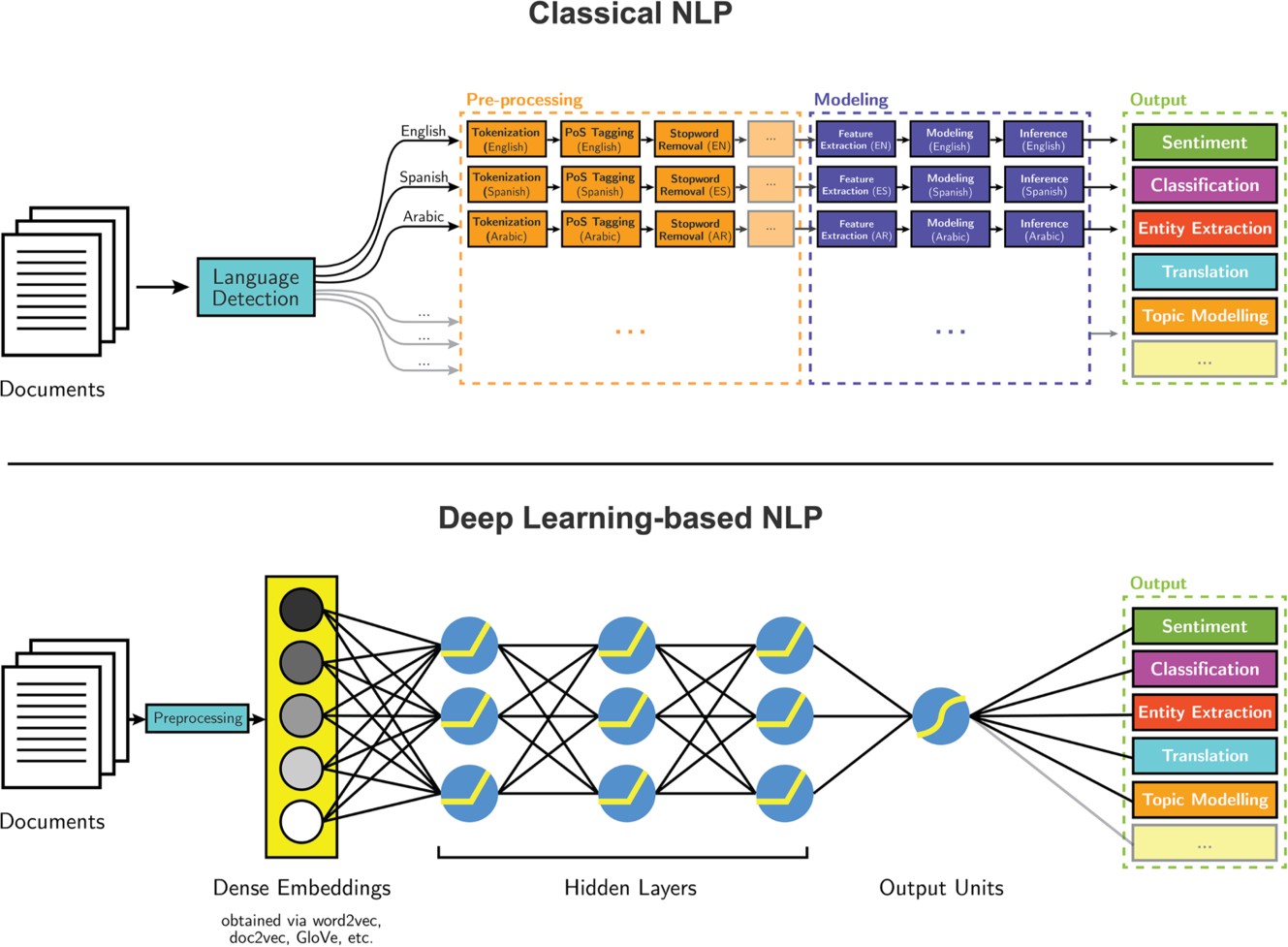
**2.2.3 MusixMatch(زياد الحوطي)**



1. **How does the program work and how does it work?**

Musixmatch uses the access permission to be able to read the transmission in the output and use that to search, identify the song, and provide the lyrics. Unlike apps like shazam that recognizes the song from the microphone, musixmatch directly hits the output because there is no interference to any noise and as a result finds the song with the lyrics faster and more accurate than its competitors

# One of the algorithms applied is:



## Classical NLP:

A Classical NLP pipeline expects a language detection system as first step: the reason is that next steps can differ depending on it. After this detection, the *corresponding pipeline* of preprocessing steps is performed, which includes Tokenization, Part-Of-Speech tagger and Named Entity Recognition. Human-designed features come from the output of these preprocessing steps. Then a model can be created and the inference for the desired task executed.

## Deep Learning:

Deep Learning is based on a completely different approach. After an initial preprocessing of raw data, the input is embedded in *dense vectors*, which can be generated by different techniques like word2vec, GloVe and doc2vec. This becomes the new input of the neural network which feeds the hidden layers. Through these layers the network learns how to reach the goal of the task.

# Features in MusixMatch:

1. **Lyrics Search**

People most likely remember part of lyrics rather than the song title. Musixmatch will let you search by lyrics and enrich your search experience to feel just magical.

1. **Synchronized Lyrics**

Engage users with perfectly-synced lyrics, line by line or word by word.

Deliver new experiences on sing-along or contextual display to enrich the music experience.

1. **Translated Lyrics**

Lyrics translations break down language barriers and add meaning to music.

Combining time synchronization with lyrics translations Musixmatch is able to offer the ultimate experience for multi-lingual listeners.

**2.2.4 Rateel (محمد ال عبدالهادي)**



Rateel : Application to identify the reader of the Qur'an.

The users of the application : Everyone who wanted to search for the voice of the reciter of the Qur’an.

Features of the Rateel App

* Get to know the reciter of the Qur'an

Disadvantages of the Rateel app

* • Does not recognize the reader in the short voice
* It takes a long time to get to know the reader
* Has a slight learning curve.

**2.3 algorithms**

**2.4 Features extraction**

**2.5 proposal system**

**2.6 comparison of the research**

**2.7 conclusion**