



ELEMENT	DESCRIPTION:	TECHNOLOGIES:
Hugging Face <<Question answering module>>	<p>There is a popular conversational AI framework called Hugging Face, which provides a variety of open-source tools and libraries for building natural language processing (NLP) models and chatbots. Hugging Face is an open-source software library for natural language processing (NLP) developed by Hugging Face Inc. The library provides state-of-the-art machine learning models for various NLP tasks such as text classification, question-answering, and language translation. The Hugging Face Transformers library is one of their most popular offerings, which provides a range of pre-trained models for tasks such as text classification, <u>question answering</u>, and text generation. The library can be used with a variety of programming languages, including Python and JavaScript, and is compatible with several popular deep learning frameworks, such as PyTorch and TensorFlow. In terms of chatbots, Hugging Face provides a tool called the "Conversational AI Platform", which allows developers to build, train, and deploy chatbots using their pre-trained models and API. In addition to the pre-trained models, the Hugging Face library also provides a wide range of tools for NLP tasks such as tokenization, data preprocessing, and model evaluation. The library has gained popularity among developers due to its ease of use, flexibility, and community support. The platform includes features such as natural language understanding (NLU), intent recognition, and entity extraction, making it easier to build more sophisticated chatbots with less development effort.</p>	Python/JS
Whisper <<Speech recognition module>>	<p>WhisperJS: A JavaScript library for creating real-time chat applications.</p>	JS
TTS <<Text to speech module>>	<p>A Text-to-Speech (TTS) library is a software component that allows applications to convert written text into spoken words. TTS libraries use a variety of algorithms and techniques to synthesize human-like speech from written text, including pre-recorded audio snippets, speech synthesis markup languages, and deep learning models. TTS libraries can be used in a variety of applications, such as assistive technologies for people with visual impairments, language learning apps, and virtual assistants. Some popular TTS libraries include Google Text-to-Speech, Amazon Polly, IBM Watson Text to Speech, and Microsoft Speech API. These libraries typically provide a set of programming interfaces that developers can use to integrate TTS functionality into their applications.</p>	

Figure 1. Element catalog.