

The main goal of this project is to bring OX Zion one step closer to the NDN or 'No-Developer-Needed' model by integrating it with natural, human language processing.

Background:

In a typical software, if someone wanted to make a report out of a specific data-set, they would need a software developer to do this. The developer would have to query the database, extract the desired information and complete programming to build the report. For a standard report, a developer would usually spend around 20 hours to perform these tasks. The necessity of a human developer for customized reporting also adds to the costs for the company, since the developer must be paid for his/her work.

With the integration of the Dialogflow API in OX Zion, anyone can just type in their query in OX Zion or ask it a question through a voice-activated device (like Google Home) and get the information they need. With the help of sample report templates, they can also build reports by themselves - eliminating the need for a developer, as well as the associated costs. This feature reduces the complexity of data retrieval by a large margin and makes getting the information companies need easier.

Why (Alignment to Mission/Vision) :

Vantage Agora strives to provide businesses with user-friendly software that helps them achieve operational excellence through the utilization of OX Zion. With the integration of this new feature, customers can simply type in their questions or use their voice to ask OX Zion for information, instead of writing code or navigating a complex database. Not only does this make finding specific data in OX Zion significantly easier for users, this feature is unique to OX Zion and makes it stand out among other current enterprise software solutions.

What:

The Dialogflow API is a conversational UX platform that enables brand unique, natural language interactions with devices, applications and services. We tokenize the queries input by users into corresponding parameters with the assistance of Dialogflow. Then, we process the query/question in the OX Zion backend and Elastic Database to ensure return of the right response. To reiterate, users can input their queries in the form of text or speech. The process for both text and speech queries is outlined in the image below.

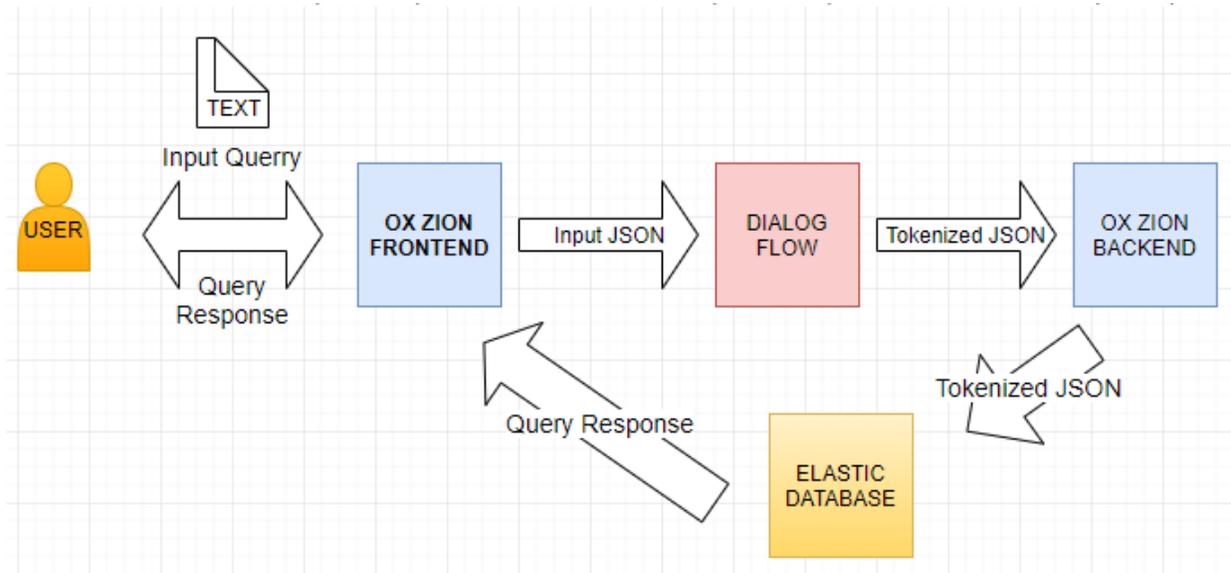


Figure 1. Processing of text input queries

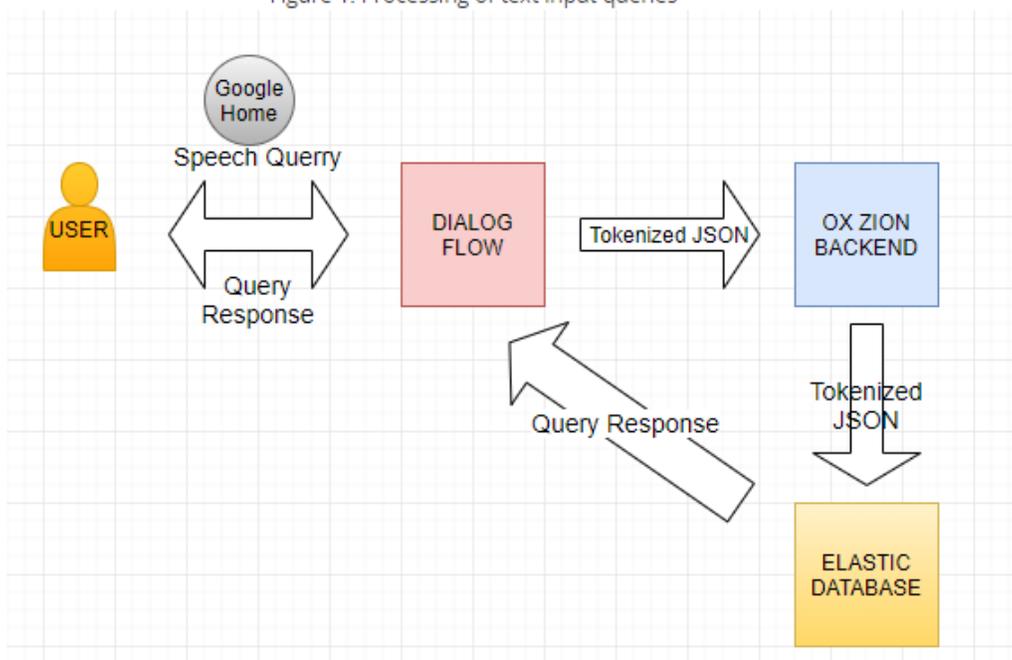


Figure 2. Processing of speech input queries

How:

Once the Dialogflow API is connected to OX Zion via the web (to communicate through API calls), a training process automatically begins. This involves creating a chat-bot agent, registering required metrics (e.g., forms, statistics, statuses), training the agent by entering sample user queries and enabling its machine learning feature so that it starts to predict user queries. You can find a helpful tutorial on how to get started with Dialogflow and build an agent in the link below. [Click here for the tutorial](#)