

EVA-based projects for the Software Engineering course 2020

April 3, 2020

Agenda

1 EVA Overview

2 Project 26

3 Project 27



App2Check Introduction

App2Check History & Intellectual Property

Startup generated in 2018 as spin-off of FINSA (consulting company) after three years of R&D to incubate our technology

One patent-pending for EVA platform + 6 research papers published by international peer-reviewed conferences

Participated in 3 international challenges on NLP & ML and won 2 of them for the accuracy of our engine

EVA platform for Cognitive Chatbots Overview

Cognitive Chatbots: The Challenge

Cognitive (e.g., smart) chatbots require continuous supervision and updates

Traditional Machine Learning demands technical skills and investments

Collect Q&A utterances for intent recognition... training... KB updates require model retraining, QA, publishing

Cognitive Chatbots: The Solution - EVA

- Lower upfront effort
- Near-zero maintenance costs
- Can be trained by the business user via chat

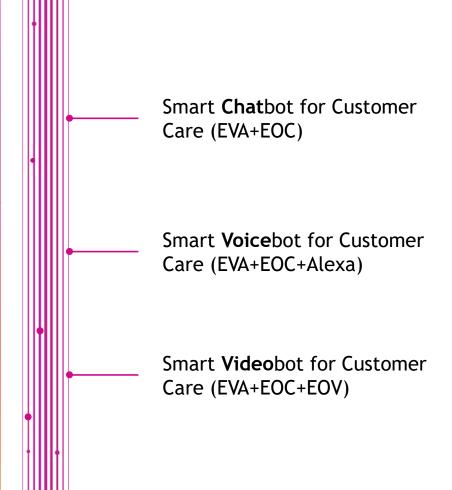
Easily import FAQs from your website or other repository Business users can manage Knowledge Base updates via CMS EVA is natively integrated with EngageOne Converse

Cognitive Chatbots: Business Cases

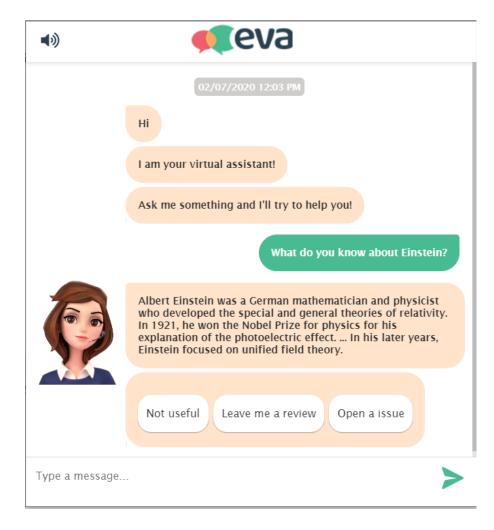
Bots for Customer Care (Supervised learning from examples of questions)

Bots for Semantic Documents Search (Unsupervised learning directly from documents)

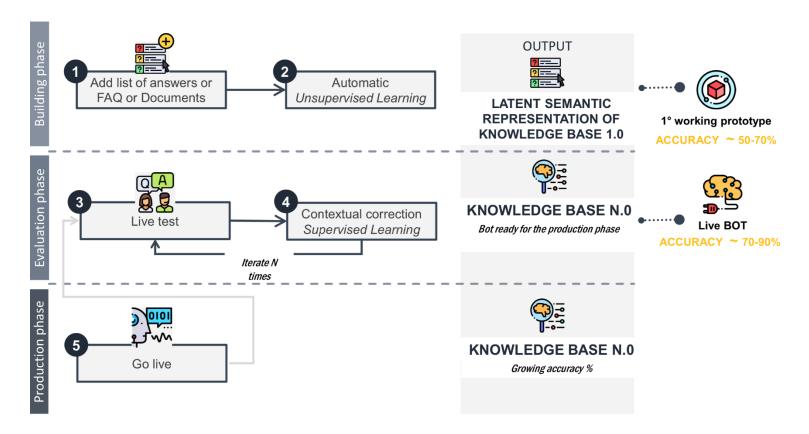
Business Case 1: Bots for Customer Care (Supervised)



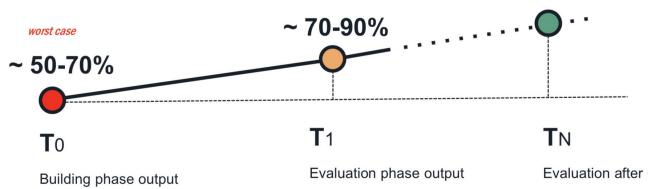
Example



EVA Process



Accuracy Grows Over Time



-First working prototype-(After adding the list of answers or the Q&A pairs)

(% of accuracy depending on the amount of time spent in the

evaluation phase)

Evaluation after Go Live

(% of accuracy growing till a stable value)

* Accuracy

Number of correct answers divided by the number questions.

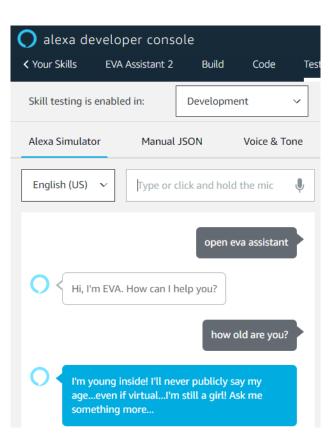
Constant growing till reaching a stable accuracy over time.

It's evaluated by the operator and corresponds to the percentage of tickets solved in a few seconds thanks to the BOT.

Key EVA differentiators

- 1. Maintain a domain-specific KB as a CMS with no technical skills
- 2. Ready Chatbot to manage general conversation and
 - a) Answer to open domain questions (info from the web) and
 - b) Generate an answer when no info is available in KB and web sources
- 3. Cognitive Search for answers in the available Docs and Web documentation
- 4. Manage just 1 KB for multiple channels (chatbot, videobot, Alexa)

Examples



EVA Voicebot (EVA+EOC+Alexa)

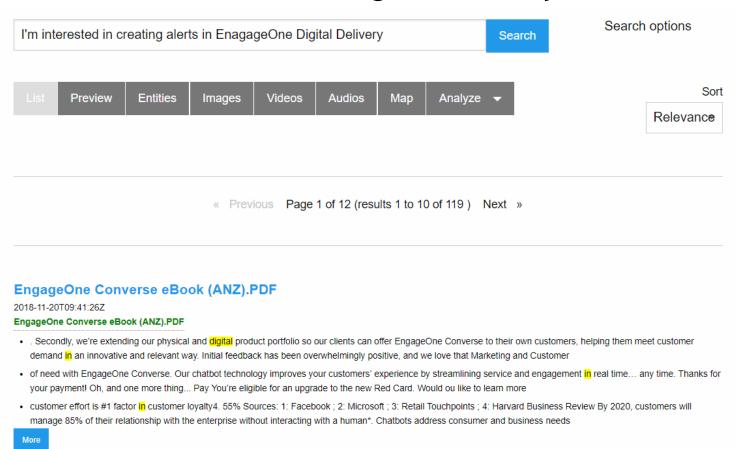
Business Case 2: Bots for Semantic Documents Search

Given a question in natural language (not just keywords), EVA retrieves the documents or web pages that are relevant for the search

It is unsupervised and represents a great opportunity when there are big amounts of documents (even multilingual) and building a specific knowledge base is too expensive

Video demo

Traditional Semantic Search Engines are keyword-based



Examples



Eva, how can I create an email template with EnagageOne Connect?

Score: 8

EngageOne Connect v2.2 - User Guide - (US English).PDF

• your Communication run. We will cover delivery setup in details in a later chapter n. Send Page (Send Phase) Send Page is where you execute the Communication run send process. We will cover the Send Page in a later chapter 13 EngageOne Connect V2.2 User Guide 1.0 - May 2018 o. Create an Email Template
The Connect Design Studio is where you can design new templates or modify existing ones. The template designs supported by the Studio are Email , ICP, SMS and Notification. In this chapter we will cover email template . p. Start a New Email Template In the main Connect page go to the Templates tab, in the secondary menu choose the Email section tab and then click the "Add Template" button and then choose New Template q. Schema Selector Before creating a new template , you will first need to select a data schema to use with this template . The selected schema defines the data fields (Data Connect) you will be able to use in the templates and

Score: 6.25

EngageOne Connect v2.2 Release Notes (US English).PDF

of the entire text box □ Improved Install and Upgrade Process Smoother install process. In addition, Installer now supports seamless upgrades from previous versions Usability Enhancements □ Add Data Connect buttons to SMS and PN □ Add Data Connect to a Link Element □ Double-click on a data field in Data Connect will insert it into the template □ Improved Preview will notify which fields are missing sample data for preview □ Remove "put your text here" place holder automatically when user inserts data to the text element □ Do not close error/notification messages automatically. User needs to acknowledge these and close them □ Remove bottom empty space when saving an ICP or an Email template □ Prevent user from choosing the primary (general) table for charts and tables □ Enable user to change Link text style □ Add 1x1 Email grid layout by default □ Improve Done button UX in studio 14 EngageOne Connect v2.2 Release Notes - May 2018

EVA searches on Documents



hey EVA, can you show me an example of a contact us bot?

Score: 8

contact us_bot html

- Example: creating a Contact Us bot Bot examples Parent topic: Bot examples: creating a Contact Us bot This is a simple bot that demonstrates how to use the Question and Message interaction types: The purpose of this bot is to find out if a customer wants to get in touch with customer support. If they do, the bot will direct the user to the appropriate contact method. If the user does not, the bot will invite the user to contact them at a later time. For background information, see Creating bots Step 1: Create a question with two buttons Step 2: Create a message (Contact us) Step 3: Create a message (No thanks) Step 4: Link buttons to messages Step 5: Preview the Contact Us bot Step 6: Test the bot in the Converse Web Client Parent topic: Bot examples
- contact us_bot html

Score: 7.75

Task_Conact_US_Bot html

• Step 1: Create a question with two buttons Bot example: X-Rample Creating a Contact Us bot Parent topic: Example: creating a Contact Us bot Step 1: Create a question with two buttons Create a question interaction that will ask the user what they want to do, and provides one of two button responses. Result of step 1 To create a question interaction: In Designer, click Create Bot, enter the name of the bot and then click OK. For example enter Contact Us in the Name field. Drag a question interaction into the Canvas. In the Name field, enter the question's name. This is the label that displays in the canvas. For example enter Greeting. In the When we receive field, enter the user responses that will

EVA searches on Web pages

EVA Example: integrating a specific «workflow»

We prepared a demo in which EVA chatbot:

- includes the "Find a dentist" feature
- 2. answers on the FAQ that we automatically extracted from your website on COVID

The "Find a dentist" feature needed some reverse engineering to understand how to use the public APIs used by your website:

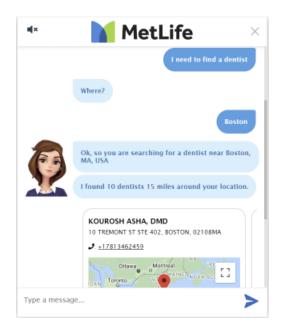
- We managed to perform the integration
- From now on, if you update the data inside your system, EVA can get the updated data (e.g. If you add a dentist or change an address)

Demo available here



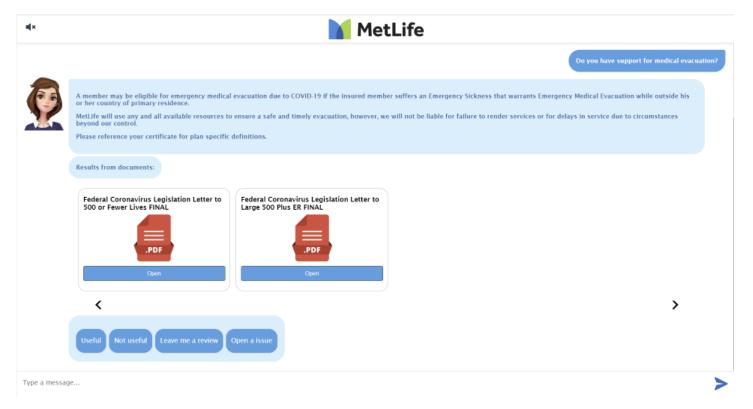
Find a Dentist







Search for info on FAQ and documents

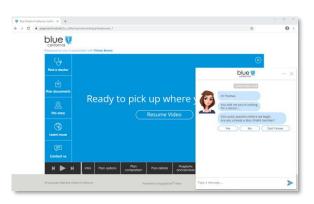




EVA Deployment Options

Your Eva powered chatbot can be deployed in a variety of ways:

- Integrated into your EngageOne Videos
- Integrated on your internal and external websites
- Integrated into your mobile app
- Pushed to clients via SMS
- As an Alexa skill







Project 26

It is required to design 2 software integrations:

- a) EVA platform and the Manychat tool
- b) EVA platform and the Flow XO tool.

Goals:

- 1. Analyze the tools: how to create a bot which is equivalent to ours through their designer?
- 2. Analysis of the available APIs and evaluate an API-based integration
- 3. Brief Presentation of 1
- A document of analysis about 2 including a feasibility study about an API-based integration
- 5. Provide a Flowgraph Template for a bot that reproduces in the 2 tools our standard bot template/behaviour



Project 27

It is required to design and implement a software integration module between EVA and:

- The open source Microsoft «Bot Framework SDK» that allows to manage the bot logic in the backend
- b) The open source Microsoft «Bot Framework Web Chat» that allows to visualize and manage the bot UI in the front-end

Goals:

- Analyze both BotFramework SDK v4 and BotFramework WebChat: how to create a bot which is equivalent to ours through this framework?
- 2. Brief Presentation of both
- Provide a Flowgraph Template for a bot that reproduces our standard bot behaviour through BotFramework SDK and BotFramework WebChat
- 4. Provide a C#/javascript project Solution that implements a parametric logic that allows to customize the chat front-end via parameters in the URL
- 5. Provide the documentation of the solution implemented (special focus on the available customizations)



Discussion

