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Chatbot in banks of Kosovo and Albania

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Abstract. Not so long ago Artificial Intelligence was only in the realm of scientific fiction. Today, it has become a reality and is growing every day more prominent in many different industries. Chatbots enable machines to mimic human conversation. This paper is an attempt to study the use of artificial intelligence and natural language processing in Albanian banks and Kosovo banks regarding the use of Albanian-speaking Chatbots and how to become a more intelligent chatbot. The data is collected from sources that are in the public domain, such as banking websites.

Keywords: IA, Chatbots, Banks, Virtual Assistant.

1. Introduction

The prospect of creating Artificial Intelligence has fascinated many people. Artificial intelligence is a broad branch of computer science that deals with building smart machines to perform tasks that typically require human intelligence. A bot ^[1] also referred to as a chatbot or chat bot is an application that runs simple and repetitive automated tasks performed by users, such as customer service or support staff. Examples of worlds in everyday use include, bots that provide weather information, make dinner reservations or provide travel information. A bot interaction can be a quick question and answer, or it can be a complex conversation that provides access to services.

Digital assistants are integrated speech-enabled artificial intelligence (AI) technologies (commonly referred to as chat-enabled applications). They are seen as dynamic systems that possess the ability to learn customer preferences. Digital assistants (aka, virtual intelligent assistants or personal intelligent assistants) offer a diverse range of benefits to consumers as this technology meets the customer demand for relevant and highly personalized contextual content delivered to users in real time, with a degree of high reliability and convenience ^[2].

2. Research Questions

How many chatbots are implemented by Kosovo banks and banks in Albania?

What are the services offered by chatbots implemented by Kosovo banks and banks in Albania?

How can a chatbot become more intelligent?

3. Chatbots implemented by Kosovo banks and Albanian banks

In Kosovo ^{[4], [7], [8], [9], [10], [11], [12], [13]} in all categories of banks there is a lack of use of artificial technology. Not excluding in the region of Albania ^{[5], [14], [15], [16], [17]} at Raiffeisen bank have established chatbots in Albanian language to help customers with the bank's products and services. The first section deals with the services handled by chatbots.

4. Services provided by RONA, Raiffeisen Bank Albania

Technological growth is being observed day by day in many different fields. RONA is an Artificial Intelligence assistant. Has the ability to interpret natural language and dialogue with people and to perform certain tasks related to the services provided by the bank. RONA was introduced as a service in January 2019, marking the first Chatbot in the Albanian market. The most interesting feature about RONA is the fact that it operates based on artificial intelligence and is available to customers 24 hours a day, 7 days a week via Facebook / Messenger, Whatsapp, Viber and on the Raiffeisen Bank website. RONA speaks Albanian and English and talks interactively with clients, a communication very similar to the communication between two real people. Thanks to the platform being integrated into the system within the bank, RONA can provide personalized information, such as a conversation with a bank employee.

Regarding concrete banking topics, RONA can currently help customers by answering questions about the bank's products and services, finding the ATM or nearest branch office, providing personal credit information, cards and even settlement of some complaints. RONA can also provide you with real-time information regarding the status of your account or credit card, respecting all information security protocols ^[3].



Figure 1. RONA Chatbot Web User Interface ^[3]

Experimental Study

Conversation

Man: What is your name?

RONA: RONA means Raiffeisen ON Assistant

Man: Find the ATM

RONA: Choose between

deposit

retreat

Man: Deposit

RONA: Choose between

Lek

Euro

Man: Euro

RONA: Please send me your location in order to find the ATM closest to you.

Man: Your location

RONA: The ATM closest to your location is: Branch Rruga e Kavajës, Rruga e Kavajës

Description

The assistant provided by the bank is able to provide only a limited set of banking services. RONA is able to answer general questions related to banking services.

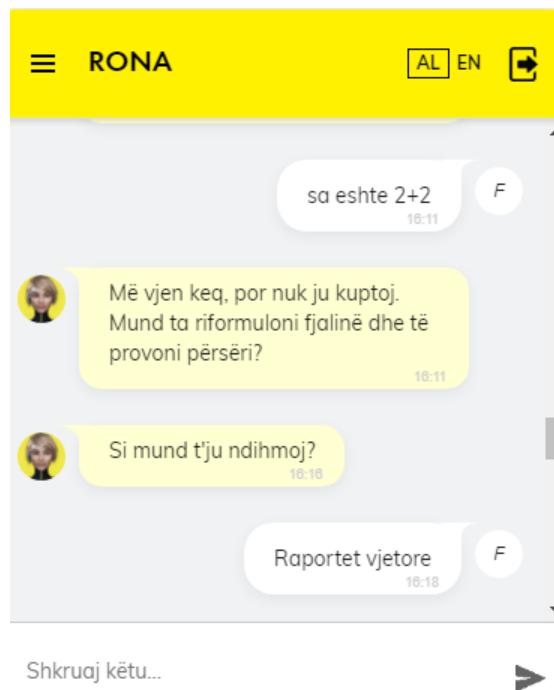


Figure 2. RONA- Conversation outside of concrete banking topics.

5. What makes a chatbot intelligent?

With growing technology, chatbots are offering solutions to many aspects of our daily lives, from buying products online to solving customer support queries. A chatbot should be created with a specific purpose in mind. Though through machine learning, the chatbot will become smarter and more versatile, it is imperative that the chatbot's initial purpose remains the core of its functionality. Rather than sifting through countless pages of data to find the information you need, chatbots should easily identify the customer's needs and promptly reply with a solution. Chatbots are all about efficiency. Conversing with a chatbot should be as fluid and seamless as a conversation with a human. The easier the chatbot is to use, the more likely it is that customers will use it more often. With a simple design and an easy to use interface, it will be far more appealing to use. Conversations with a chatbot should be short enough to get the message across, yet engaging enough to keep the conversation going until the user's requirements

are met. A useful aspect of a chatbot is the ability to store previous information, making it easier to identify the customer's intentions and saving them time and effort. A good chatbot is defined by its purpose, how well it achieves its targeted goals and the experience by which users interact with it.

To meet the needs of employees and customers, banks need to train, build and launch artificial intelligence-enabled talking robots. Businesses are already aware that chatbots are not smart at the beginning of their deployment. They have become intelligent using technologies like machine learning, big data, NLP, etc., which helps the chatbot understand and interpret the context, the purpose and the continual growth of its knowledge base.

Some of the features that can make a chatbot smart:

- Contextual meaning

In customer engagement, real-time contextual understanding is essential to deliver meaningful conversation. To have a good understanding of the context, a chatbot should analyze inputs such as time, day, date, conversation history, tone, sentence structure, purpose, identity, etc.

- Permanent learning

Learning is key to ensuring that the chatbot identifies patterns in the data it receives and answers users' questions in the most appropriate way. Thus, learning skills are essential if a chatbot is to become intelligent.

- Delivery of agent

Treating a user when there is no response dictates satisfaction results. Reinforcement of these results can best be achieved when the conversation is transferred to a human agent.

- Sound technology

Voice chatbots are an integral part of almost every feature that focuses on providing a positive customer experience.

For banking institutions, processes such as purchasing, financial recommendations, customer behavior analysis, fraud detection are best achieved using chatbots and machine learning skills.

For example in the chatbot RONA to provide better service to customers to add the voice recognition processing module. This type of module can be achieved with the help of AIML (AIML is the Artificial Intelligence Mark-up Language which provides an XML-based brain mechanism for Chabot.) And with speech recognition applications [6]. Requires a number of libraries for processing voice inputs. To assist the training, training modules are used, the system of third party experts, the final research assistant.

6. Conclusion

To be competitive in the market it is important to stay up to date with technology. To answer the research question in this paper, How many chatbots are implemented by Kosovo banks and banks in Albania? There is a lack in the development of emerging technologies such as AI-enabled chatbots in Kosovo and Albania which is clear from data collection to respond to this paper. Of all the banks operating in Kosovo and Albania, only one bank has a chatbot available with several services it offers to help customers. This means that these technologies are not yet very popular among Kosovo and Albanian banks.

With the introduction of chatbots in the banking sector, it is important that chatbots' answers are correct. This will not only help customers gain confidence in using chatbots, but will also help the bank in reducing customer traffic to bank branches. What are the services offered by chatbots implemented by banks of Kosovo and banks in Albania? Banks in Kosovo have not implemented AI technology yet. Chatbot RONA from Raiffeisen Bank of Albania can help customers by answering questions about the bank's products and services, finding the ATM or the nearest branch office, providing information on personal loans, cards and even solving some complaints, provides information on your account or credit card balance. RONA is available all the time. It is a known fact that a chatbot must have a certain feature in order to increase its usability among users. If the chatbot lacks those key components, it may not be used by users in the long run. RONA as another feature can be added to account monitoring, payment

processing, fraud prevention, sending notifications, collecting customer feedback, etc. Although it is seen that the use of Artificial Intelligence by Albanian banks is low, the first chatbot in Albanian language was well received by Raiffeisen bank customers. How to be a more intelligent chatbot? Creating files in AIML language makes a chatbot more intelligent as it enriches the chatbot brain with a lot of information. Some of the features that can make a chatbot intelligent: Contextual Understanding, Lifelong Learning, Agent Delivery, Voice Technology.

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