SJIF Impact Factor 2021: 8.013| ISI I.F.Value:1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 6 | Issue: 6 | June 2021 - Peer Reviewed Journal

STUDENT FRIENDLY CHATBOT- ANDREA

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ABSTRACT

A chatbot is an artificial intelligence (AI) software that can simulate a conversation with a user in natural language through messaging applications, websites, mobile apps or through the telephone. A chatbot is often described as one of the most advanced and promising expressions of interaction between humans and machines. However, from a technological point of view, a chatbot only represents the natural evolution of a Question Answering system leveraging Natural Language Processing.

I. INTRODUCTION

A chatbot is an intelligent piece of software that can communicate and performing actions like a human. Chatbots are used a lot in customer interaction, marketing on social network sites and instantly messaging the client. There are two basic types of chatbot models based on how they are built; Retrieval based and Generative based models.

II. RELATED WORK

In the world of machine learning and AI there are many kinds of chat bots. Some chat bots are virtual assistants, others are just there to talk to, and some are customer support agents. Here we are classifying them in 2 differenttypes namely: -

- Retrieval based Chatbots
- Generative based Chatbots

Retrieval based Chatbots- A retrieval-based chatbot uses predefined input patterns and responses. It then uses some type of heuristic approach to select the appropriate response. It is widely used in the industry to make goal-oriented chatbots where we can customize the tone and flow of the chatbot to drive our customers with the best experience.

Generative based Chatbots- Generative models are not based on some predefined responses. They are based on sequence 2 sequence neural networks. It is the same idea as machine translation. In machine translation, we translate the source code from one language to another language but here, we are going to transform input into an output.

III. METHODOLOGY

In this project we have built a chatbot using Neural Networks. The chatbot is trained on the dataset which contains categories, pattern, and responses. We have used a special recurrent neural network to classify which category the user's message belongs to and then the program will give a random response from the list of responses.

Technologies Used

This project is a retrieval based chatbot using: -

Dialog flow- Dialog flow is a natural language understanding platform used to design and integrate a conversational user interface into mobile apps, web applications, devices, bots, interactive voice response systems and related uses.

Flutter- Flutter is an open-source UI software development kit created by Google. It is used to develop applications for Android, iOS, Linux, Mac, Windows, Google Fuchsia, and the web from a single codebase. The first version of Flutter was known as codename "Sky" and ran on the Android operating system.

Dart- Dart is a client-optimized programming language for apps on multiple platforms. It is developed by Google and is used to build mobile, desktop, server, and web applications. Dart is an object-oriented, class-based, garbage-collected language with C-style syntax. Dart can compile to either native code or JavaScript.

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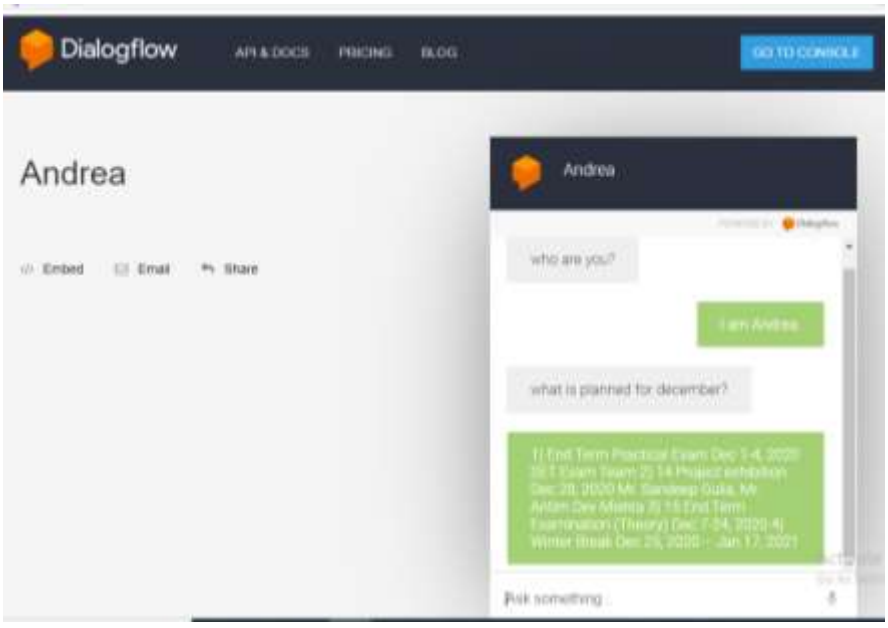
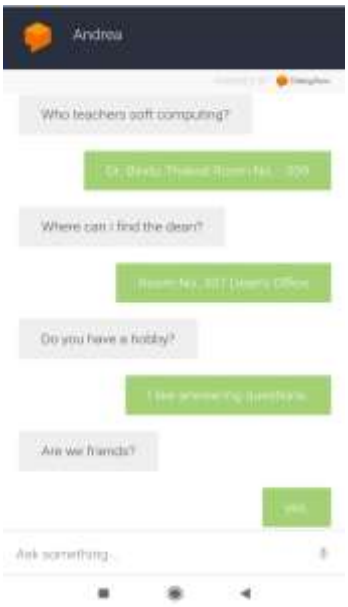
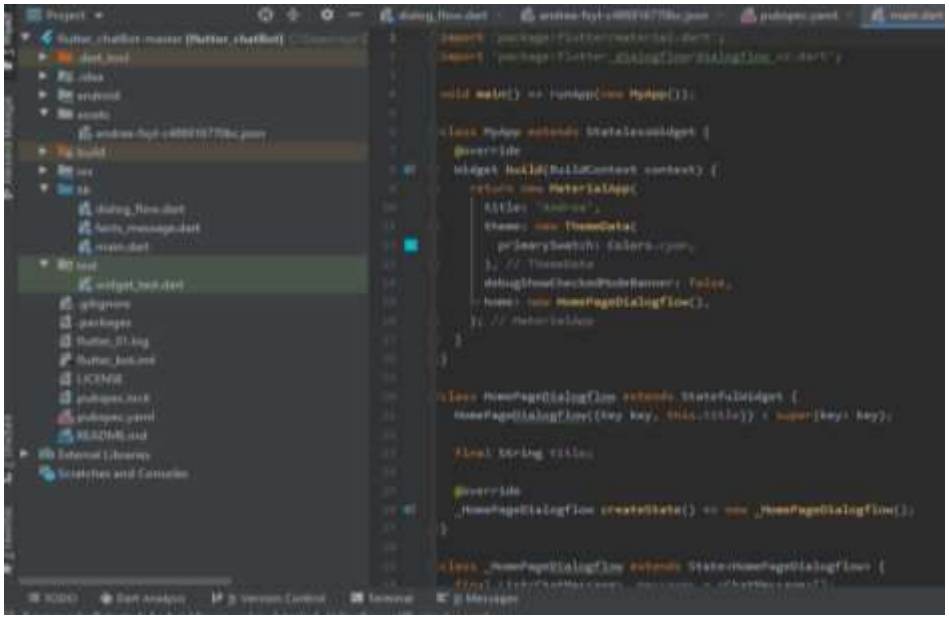
Google cloud console- Google ***Cloud*** Platform lets you build, deploy, and scale applications, websites, and services on the same infrastructure as Google.

IV. FIGURES AND TABLES







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VI. CONCLUSION AND FUTURE SCOPE

From my perspective, chatbots or smart assistants with artificial intelligence are dramatically changing businesses. There is a wide range of chatbot building platforms that are available for various enterprises, such as e-commerce, retail, banking, leisure, travel, healthcare, and so on. Chatbots can reach out to a large audience on messaging apps and be more effective than humans. They may develop into a capable information-gathering tool soon.

VII. ACKNOWLEDGMENT

We would like to express our special thanks of gratitude to our teacher Dr. Bindu Thakral who gave us the golden opportunity to do this wonderful project on the topic STUDENT FRIENDLY CHATBOT - ANDREA, which also helped us in doing a lot of Research and we came to know about so many new things.

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