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CREATING A WHATSAPP CHATBOT

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Abstract: Conversational modeling is an important task in natural language processing as well as machine learning. Like most important tasks, it's not easy. Previously, conversational models have been focused on specific domains, such as booking hotels or recommending restaurants. They were built using hand-crafted rules, like ChatScript , a popular rule-based conversational model. In 2014, the sequence to sequence model being used for translation opened the possibility of phrasing dialogues as a translation problem: translating from an utterance to its response. The systems built using this principle, while conversing fairly fluently, aren't very convincing because of their lack of personality and inconsistent persona . In this paper, we experiment building open-domain response generator with personality and identity. We built chatbots that imitate characters in popular TV shows: Barney from How I Met Your Mother, Sheldon from The Big Bang Theory, Michael from The Office, and Joey from Friends. A successful model of this kind can have a lot of applications, such as allowing people to speak with their favorite celebrities, creating more life-like AI assistants, or creating virtual alter-egos of ourselves. The model was trained end-to-end without any hand-crafted rules. The bots talk reasonably fluently, have distinct personalities, and seem to have learned certain aspects of their identity. The results of standard automated translation model evaluations yielded very low scores. However, we designed an evaluation metric with a human judgment element, for which the chatbots performed well. We are able to show that for a bot's response, a human is more than 50% likely to believe that the response actually came from the real character.

I. INTRODUCTION

Chatbot is a machine that interact with the human and it provides answer to the several problem of human in its domain. We can safely say that we are in or at least entering the era of the chatbot. The big players, Google, Facebook, Microsoft and others, are all busy developing and improving this innovative user experience technology. Messaging applications are now more widely used than social networks, which is good news for the chatbot as they are such messaging applications!

The most natural definition of a chatbot is – a developed a program that can have a discussion/conversation with a human. For example, any user could ask the bot an inquiry ora statement, and the bot will respond or perform an activity as appropriate.

A chatbot interacts on a format similar to instant messaging. By artificially replicating the patterns of human interactions in machine learning allows computers to learn by themselves without programming natural language processing.

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For example, if you've asked Amazon's Alexa, Apple Siri, or Microsoft's Cortana, "What's the weather?", it would respond according to the latest weather reports it has access to. The complexity of a chatbot is determined by the sophistication of its underlying software and the data it can access.

Every enterprise has expanded IT infrastructure. From different fields, on-premise to cloud, companies with different supply providers, run on many different, internal and characterized- built applications, as well as ERP, encompass applications. There are other core applications like CRM and customer portals, which are the backbone of ERP.

Currently, many e-commerce companies are looking at various ways to used to improve their customer experiences.Whether for shopping, booking tickets or simply for customer service. The next time you hear about a chatbot, especially in business and travel, remember to look beyond the fancy term. And ask about how it really adds value to your travel program.

II. LITERATURE REVIEW

In 1950, Alan Turing asked the question "Can machines think?" Turing conceptualized the problem as an "imitation game" (now called the Turing Test), in which an"interrogator"asked questions to human and machine subjects, with the goal of identifyingthe human. If the human and machine are indistinguishable, we say the machine can think.

In 1966, Joseph Weizenbaum at MIT created the first chatbot that, arguably, came close to imitating a human: Given an input sentence, ELIZA would identify keywords and pattern match those keywords against a set of pre-programmed rules to generate appropriate responses. Since ELIZA, there has been progress in the development of increasingly intelligent chatbots.

In 1972, Kenneth Colby at Stanford created PARRY, a bot the impersonated a paranoid schizophrenic.

In 1995, Richard Wallace created A.L.I.C.E, a significantly more complex bot that generated responses by pattern matching inputs against <pattern> (input) <template> (output) pairs stored in documents in a knowledge base. These documents were written in Artificial Intelligence Markup Language (AIML), an extension of XML, which is still in use today. ALICE is a three-time winner of the Loebner prize, a competition held each year which attempts to run the Turing Test, and awards the most intelligent chatbot.

Modern chatbots include: Amazon's Echo and Alexa, Apple's Siri, and Microsoft's Cortana. .

The architectures and retrieval processes of these bots take advantage of advances in machine learning to provide advanced "information retrieval" processes, in which responses are generated based on analysis of the results of web searches. Others have adopted "generative"models to respond; they use statistical machine translation (SMT) techniques to "translate" input phrases into output responses. Seq2Seq, an SMT algorithm that used recurrent neural networks (RNNs) to encode and decode inputs into responses is a current best practice.

Benchmarking of existing expertise is a very important element of formative research, so the past few weeks the team has been performing a literature review of current thinking and writing on the topic. We've been aggregating these resources into a best-practice library — a chatbot book club of sorts. Since we've committed to a transparent process, it makes sense to publicly share these resources and acknowledge that they will be very important to the team as we move forward with the project.

Much research work has focussed on improving recognition rates of the human voice and the technology is now approaching viability for speech based human computer interaction. Speech Interaction splits into more than one area including: speech recognition, speechparsing, NLP (Natural Language Processing), keyword identification, Chabot design/personality, artificial intelligence etc. Chatbot is a computer program that have the ability to hold a conversation with human using Natural Language Speech

Nowadays it is the era of intelligent machine. With the advancement of artificial intelligent, machine learning and deep learning, machines have started to impersonate as human. Conversational software agents activated by natural language processing is known as chatbot, are an excellent example of such machine. This paper presents a survey on existing chatbots and techniques applied into it. It discusses the similarities, differences and limitations of the existing chatbots. We compared 11 most popular chatbot application systems along with functionalities and technical specifications. Research showed that nearly 75% of customers have experienced poor customer service and generation of meaningful, long and informative responses remains a challenging task. In the past, methods for developing chatbots haverelied on hand-written rules and templates. With the rise of deep learning these models were quickly replaced by end-to-end neural networks. More specifically, Deep Neural Networks isa powerful generative-based model to solve the conversational response generation problems. This paper conducted an in-depth survey of recent literature, examining over 70 publications related to chatbots published in the last 5 years. Based on literature review, this study made a comparison from selected papers according to method adopted. This paper also presentedwhy current chatbot models fails to take into account when generating responses and how thisaffects the quality conversation.

III. SYSTEM ANALYSIS

In a nutshell, Sentiment Analysis is an automated process that programmatically extracts topics from texts and the feeling of the writers towards such topics. It is a well-known and widely used practice in marketing and politics, to prepare and adjust communication strategies.

Chatbots are meant to automate and streamline communication with users, providing immediate responses and improving the customer experience through a friendly, conversational interface. One very common use of chatbots is first-level Customer Support. The purpose of Customer Support, though, goes far beyond the actual help provided to users: it is a valuable source of information about products and services, how do user rate them, what users like and what frustrates them.

CLASS DIAGRAM

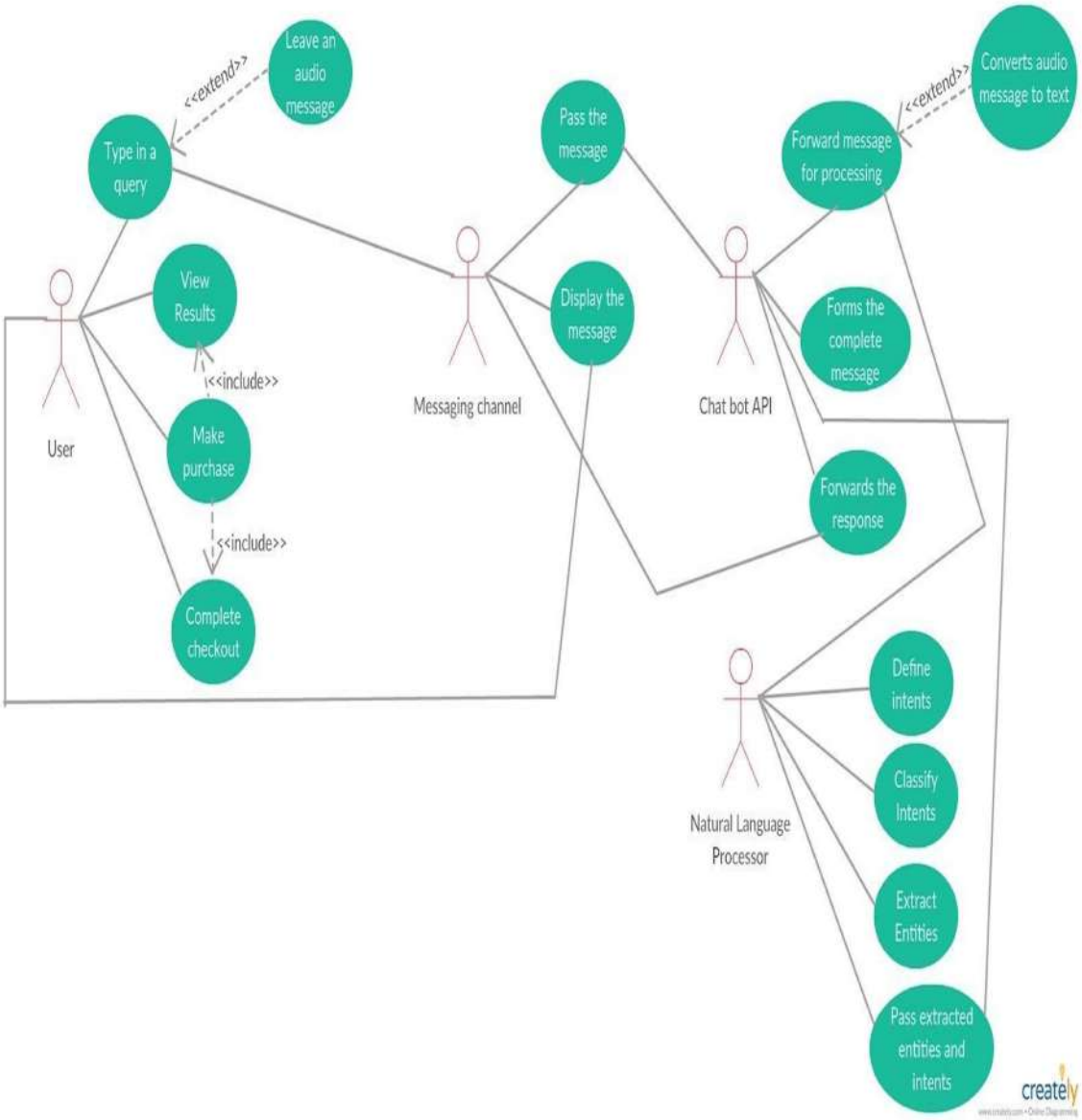


Figure 4: CLASS DIAGRAM FOR CHATBOT

IV. IMPLEMENTATION

In the project we tried to classify the product into three categories - positive, negative and neutral sentiment analysis. Figure represents the implementation process. The implementation steps may include,

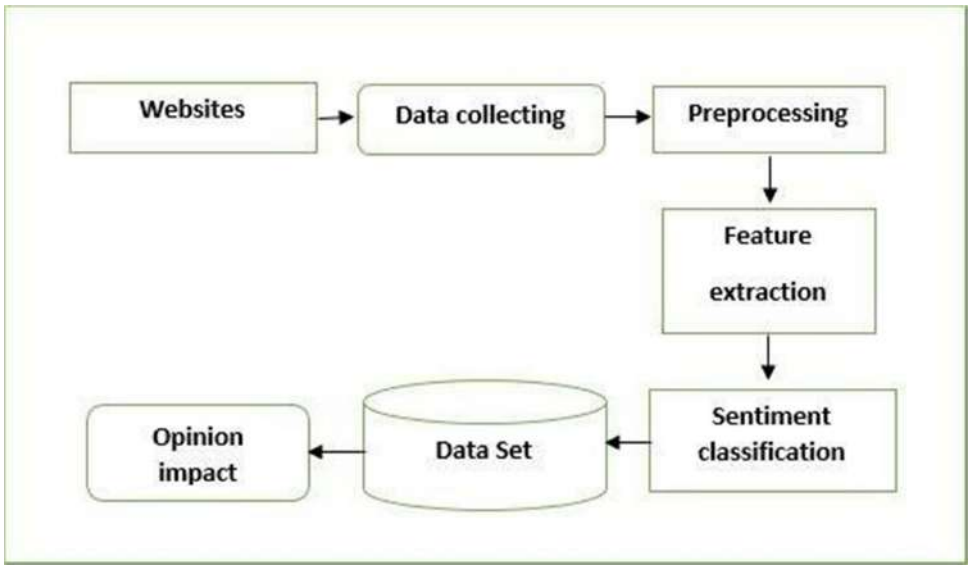


Figure 5: Feature Extraction Process

DATA COLLECTION

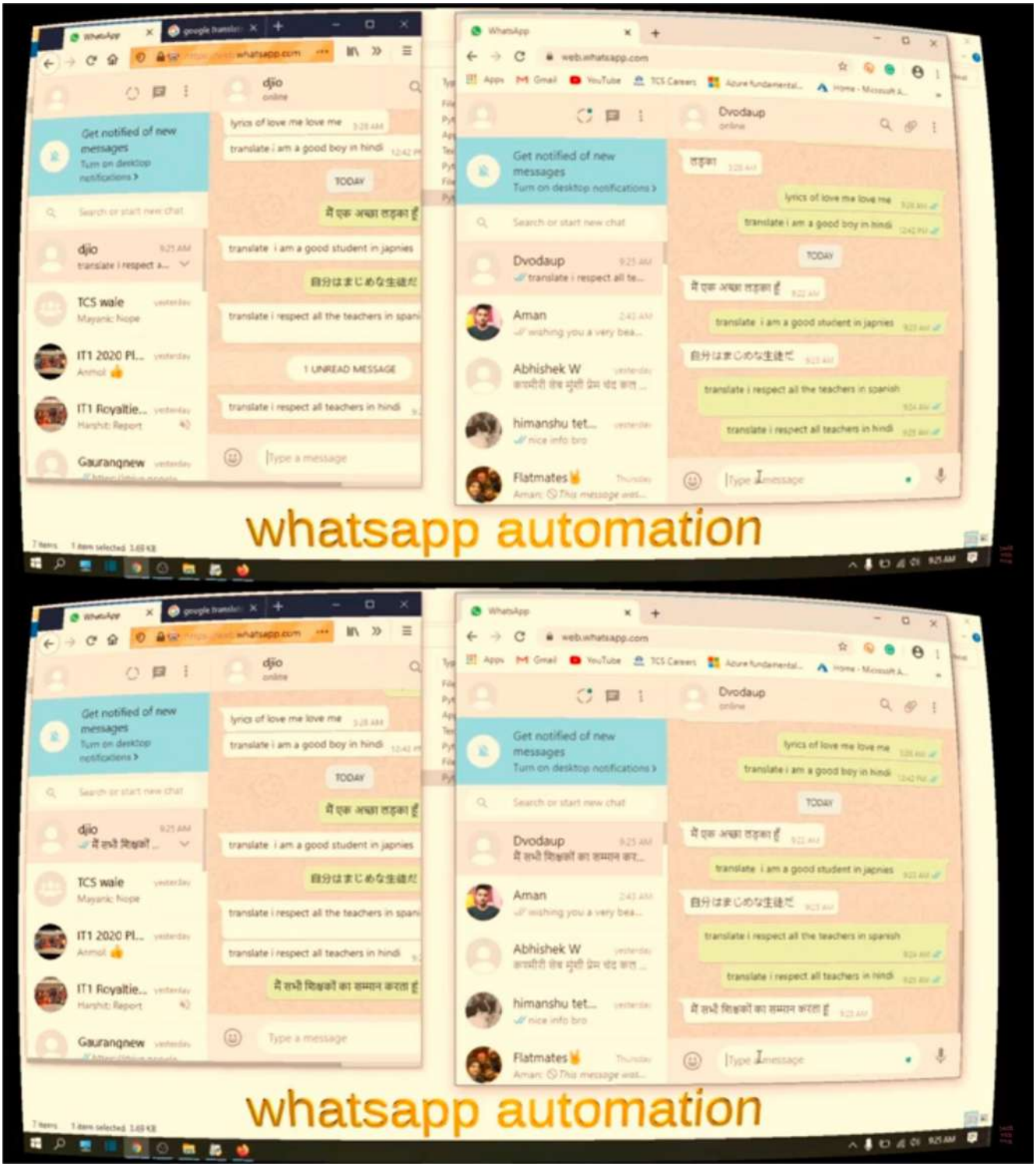
Data collection is the way to collect the basic data or document on which work is done.Consumers express their sentiments about particular products on e-commerce websites like amazons. Their sentiments and opinions are expressed in different way, with different vocabulary, context of writing, usage of short forms and slang, making the data huge and disorganized. Manual analysis of sentiment data is virtually impossible. Therefore, we uses The sentiment analysis to make this effort easy. Here we collect the data set from uc brekely named as cornell movies.

PREPROCESSING

The preprocessing is nothing but filtering the extracted data before analysis. It includes identifying and eliminating non-textual content and content that is irrelevant to the area of study from the data. Of all data, text is the most unstructured form and so means we have a lot of cleaning to do.These pre-processing steps help convert noise from high dimensional features to the low dimensional space to obtain as much accurate information as possible from the text.

V. RESULT

For the result we have attached the link of result in action.



VI. CONCLUSION

From my perspective, whatsapp chatbots or smart assistants is dramatically changing businesses. There is a wide range of chatbot building platforms and also wide range of chatbot types that are available for various enterprises, such as e-commerce, retail, banking, leisure, travel, healthcare, and so on but due to this apprich we want to make more user centric chatbot which will help both user and business to handle huge customer base at a time.

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 in the near future.

These days, consumers expect to be able to find the information they're looking for online quickly and easily. And when a business can't provide that type of experience, they become frustrated. Chatbots are poised to ease these frustrations by providing the real-time, on- demand approach that consumers are seeking out.

REFERENCES

[1] Computer History Museum (2006), "Internet History—1970's", *Exhibits*, ComputerHistory Museum, archived from the original on 2008-02-21, retrieved 2008-03-05

[2] Güzeldere, Güven; Franchi, Stefano (1995-07-24), "Constructions of the Mind", *Stanford Humanities Review*, SEHR, Stanford University, **4** (2), retrieved 2008-03-05

[3] Mauldin, Michael (1994), "ChatterBots, TinyMuds, and the Turing Test: Entering theLoebner Prize Competition", *Proceedings of the Eleventh National Conference on Artificial Intelligence*, AAAI Press, retrieved 2008-03-05 (abstract)

[4] Network Working Group (1973), "RFC 439, PARRY Encounters the DOCTOR", Internet Engineering Task Force, Internet Society, retrieved 2008-03-05

[5] Sondheim, Alan J (1997), *<nettime> Important Documents from the Early Internet (1972)*, nettime.org, archived from the original on 2008-06-13, retrieved 2008-03-05

[6] Searle, John (1980), "Minds, Brains and Programs", Behavioral and Brain Sciences, 3 (3): 417–457, doi:10.1017/S0140525X00005756

[7] Shevat, Amir (2017). *Designing bots: Creating conversational experiences* (First ed.).Sebastopol, CA: O'Reilly Media. ISBN 9781491974827. OCLC 962125282.

[8] Turing, Alan (1950), "Computing Machinery and Intelligence", *Mind*, **59** (236):433–60, doi:10.1093/mind/lix.236.433

[9] Weizenbaum, Joseph (January 1966), "ELIZA—A Computer Program For the Study of Natural Language Communication Between Man And Machine", *Communications of the ACM*, **9** (1): 36–45, doi:10.1145/365153.36516