

# **GLOBAL JOURNAL OF ENGINEERING SCIENCE AND RESEARCHES AIRLINE BOT – THE TRANSFORMED EXPERIENCE** Rincy Mariam Thomas<sup>\*1</sup>, Supriya Punna<sup>2</sup>, Mr. C Kishor Kumar Reddy<sup>3</sup> &

Dr B V Ramanamurthy<sup>4</sup>

\*1,2,3&4 Stanley College of Engineering and Technology for Women, Hyderabad

#### ABSTRACT

Chatbots are revolutionizing the way customer's talk to businesses and more industries are starting to take notice. Chatbots have presented themselves as a forward-thinking and capable way of elevating the experience of flying commercial. The chatbot can quickly and accurately provide you with directions, answer FAQ's. The airline industry is one marked by fierce competition and a reputation for lackluster customer service. It seems that every day brings some new story about delayed flights or rowdy customers. With prices between competing airlines varying only slightly, service and experience is a significant differentiator. Often, it can be the difference between creating a loyal customer and creating one who spreads their poor experience to other potential passengers. The airline's chatbot sends booking confirmation, 24 hour check in reminder before the flight, and boarding passes are all sent through the chatbot. If you forget your gate, no problem. Airline chatbots can even alert you of delays and gate changes.

*Keywords: IBM Watson, Automation, Chatbot, Service design, Mobile travelling booking service, Digital communication, AI assistants.* 

# I. INTRODUCTION

Chat or speech is one meaningful form of communication between humans. Chat becomes more natural interaction than graphic base interface so will be broadly used in humanizing computer interaction to human. Chatbot worked by interpreting the message that given by the user, and then give response base on captured parsed meaning of the message.

The present day technology promote an up to date internet work and mobile communication which is applying an intense influence on the enlargement course of visitor industry while conducting tourists convenient, quick and brand new travel existence. Mobile travel booking service (MTBS), is an advanced way of trip booking, means that customer can make use of mobile devices to book hotels, resorts, air tickets and other tourism product or duty on the move via GPRS,3G/4G, Wi-Fi and other Wi-Fi network, which is famous with (Yang, Zhong, & Zhang, 2013). In comparison to the customary wired travel booking, the central characteristic of mobile travel booking is that the customer can book tourism products or can have service at anytime from anywhere (Wang & Liao, 2008). Anyways, mobile travel booking as a particular information system, if the user will not use effectively, it gets difficult for the travel service provider to gain profit. So, it is very important for this paper to identify the up to date intentions of the mobile travel booking service. Expectation-confirmation model (ECM) in Information System (IS) is a theoretical framework which is accepted all over to make the users understand the continuance behavior, and many other studies with this model have been expanded (Larsen, Sørebø, & Sørebø, 2009; Tang & Chiang, 2010; Lee 2010).

Service design is a holistic field that views service systems with the core principles of human-centeredness and cocreation (Sanders & Stappers, 2008). Keeping in mind about the needs of users and other stakeholders, service design goal is to provide value through service solutions which may contain both physical as well as digital elements. The digital field has improved rapidly especially in the context of digital services, the advancement of technologies and digital capacities has increased in the range of solutions which are available. A service has many ways to use the AI assistant – as a direct interface for the customer, a skill on the service backend supporting the service delivery or an assistant to employees by augmenting their capacities to deliver better service in the encounter with the customer. The AI makes sure that it plays an active role in the service which is offered to it. Services involve several actors (see Latour, 2005) and are based on interactions with touch points, which can be providers for





#### ISSN 2348 - 8034 Impact Factor- 5.070

formulating marketing strategic interactions or products (Segelström & Holmid, 2012). Co-creation is an important part of services (Holmlid, 2009).

Question answering (QA) systems are identified as an information retrieval system which aims to respond to the natural language queries and also returns the answers instead of the lists of documents. Although Question and Answer (QA) differs from standard information retrieval in the response format, both processes share a lack of interactivity. In the typical information-seeking session the user submits a query and the system returns a result; the session is then concluded and forgotten by the system. It has been argued (Hobbs, 2002) that providing a Question and Answer system with a dialogue interface which would encourage and accommodate the submission of multiple related questions and handle the user's requests for clarification.

In the last few years the variety in the chat bots has increased. Therefore they were many chat bots introduced especially in facebook as they are the means of communication and they are opted the most as the designing of them will not include more cost.

In the late 90s, the diffusion of the internet initiated a debate concerning the transformation of the holidaydistribution channel. The so-called 'disintermediation effect', postulated that the potential of information and communication technologies and the corresponding reduction of transaction costs, could lead to the emergence of electronic markets for holidays (and holiday components), at the expense of brick-and-mortar tourism intermediaries (i.e. travel agencies and tour operators). As we approach 2020, the development and diffusion of robotics and artificial intelligence in services spark a second debate which gave rise to many questions.

As we know chat bots are the evolving trend of the current generation. In this paper we are mainly discussing about the Airline Chatbot and how its implementation is taking place in this world. Regarding this category the scope is very high because in previous days if we are in a plan to travel we used to book tickets before many days as per the relevant information provided by the Airlines members which is actually a very huge process. But now everything has become online where we can use the chat bots, they help us to solve all our queries about the trip on which we want to go. They give us the appropriate answers for the questions we ask in a natural process of communication. They are improved versions of the chat bots where all the options are placed in a single page where we need not need to browse much. Over all it is an interactive and a simple process where the AI assistants are appointed to fulfill our needs.

Today's most common way of planning holidays is – apart from going to the travel agency – the gathering of information from the internet. Many forms with many questions have to be filled in before you are able to get more information. Often users forget to really input all information, which results in error messages. Especially elder people are not used to work with computers. But exactly this part of society spends money in the field of tourism. That's why it makes sense to develop systems which are easy to control by this target group. Language is the most effective natural form of exchanging information.

On the other hand, internal chat bots may strongly influence and change the future organization communication and collaboration within the company. Apart from all these the answers returned by the chat bot will be understandable and will not be too lengthy and will also be apt to the question which is asked by the customer. It is also not a time taking process. The answers will be displayed on the screen within fraction of seconds. So at last AI is one of the fields with the potential of reshaping service interactions in the near future, of which AI assistants in the current market are visible examples. Chat bots is turning into a necessity and is opted by all the customers as it is uncomplicated.

# II. RELEVANT WORK

Jizhou Huang et al. proposed a paper: "Extracting Chatbots Knowledge from Online Discussion Forums": An Online Discussion Forum is a web society that allows humans to discuss general topics like movies, sports and so on. I n this paper, there is a unique approach for extracting a rich-quality pairs of online discussion forums, which





#### ISSN 2348 - 8034 Impact Factor- 5.070

are actually extracted using cascaded frame work. In common this discussion will have seven discussion sections. In which each of it focuses on a specific discussion themes and involves several threads. Comparisons with related networks are also done to compare the manual knowledge building techniques with the manual knowledge building techniques with the most efficient in building a specific domain chatbot. A very brief explanation about cascaded networks and its role is mentioned in the research paper [1].

AM Rahman et al. proposed a paper: "Programming challenges of chatbot: current and future prospective": The paper firstly tells us how to speak to a chatbot by taking few initial measures which is by giving the user names and then there is chance for the user to develop a conversation with the bot. After this, the needs of the people which they want to satisfy from the bots are satisfied. This scenario is seen commonly in business which provides better experience with less cost. The new techniques are added to the previously existing chatbots as it is a rising trend in this modern world. The people who develop the bots should be in a condition to understand certain qualities such as scalability, stability and flexibility issues. By this the present as well as the future prospective can be reached [2].

M.Dahiya et al. proposed a paper: "A Tool of Conversation": This paper addresses the design and implement of a chatbot system. How smartly a chatbot can communicate with the users is being discussed but it is only based on the text only chatbot. When questions are being asked the chat bit will respond from a predefined pattern. Mainly a chatbot is built by pattern comparing, which the sequence of the sentence is identified and a saved response pattern is given to the user. It can be simply mentioned like this user -> ask question -> chatbot -> given response -> user. The Facts which are to be noted while designing a chatbot: 1) Selection of OS 2) Selection of Software 3) Cheating a Chatbot 4) Creating a Chat 5) Pattern Matching 6) Simple 7) Conservational and Entertaining. Implementation process involves: 1) Creating a Dialog Box 2) Creating a Database 3) Modules Description [3].

Ayesha Shaikh et al. proposed a paper: "A survey on Chatbot Conversational Systems". A Chatbot is a human like conversational character. It is computer program which develops a conversation through auditory or textual methods. Its conversation and all the human like skills are due to the Artificial Intelligence. Previous Chatbots use simple keywords and pattern matching methods. For developing number of heuristic rules, language expert knowledge is necessary, these rules maintain the quality of the systems. The paper also mentions about the methods, using dialogue acts and POS- tagged tokens, long term memory and knowledge extractor, experimental results and discussions. So, this paper more deals with the type of conclusion that a chatbot does [4].

Ulrich Gnewuch et al. proposed a paper: "Faster is Not Always Better: Understanding the Effect of Dynamic Response Delays in Human-Chatbot Interaction": This research paper generally deals how the robots as well as the humans response delays to the texted message. Specially, we encounter that when responses are dynamically delayed, the person who is using perceive chatbots are more of human-wish are more socially present and are more satisfied with the overall interaction than when responses are sent near instantly. Chatbots response time represents a social cue that elicits social responses from users. Dynamic response delay is necessary while there is a case of specific characteristics. Our findings provide more an important initial step towards making chatbot-human interaction more natural [5].

Zhuling Zhong et al. proposed a paper: "Understanding Antecedents of Continuance Intention in Mobile Travel Booking Service": This paper has become a pioneer of the integrated model for grasping users' continuance planned behavior towards mobile travel booking service. The outcome of the mobile travel booking services is actually been affected by user satisfaction, perceived usefulness and the subject norm. The more significant among all these is the user satisfaction. In this paper finally the author listed out the strategies and he discussed about the outcomes [6].

Titta Jylkas et al. proposed a paper: "AI Assistants as Non-human Actors in Service Design": The rapid improvement in technology and the usage of artificial intelligence in the past years are giving new hopes for the creation of service encounters. Now these service encounters are not only mandatorily created for the humans but also for the non-humans. An example for the above sentences is the AI assistants. Therefore in this paper we will be





# ISSN 2348 - 8034 Impact Factor- 5.070

discussing about the AI assistant by taking it as an example and how this non-human actor will play its role when it comes to service encounters [7].

Silvia Quarteroni et al. proposed a paper: "A Chatbot-based Interactive Question Answering System": Question answering can be watched on the basis of information retrieval systems whose goal is to respond to the commonly or naturally used language queries by the process of giving back answers rather than a document format. So in this paper we report about the insight into the design, execution and assessment of a chatbot-build dialogue interface [8].

Darius Zumstein et al. proposed a paper: "Chatbots– An Inteactive Technology For Personalized Communication, Transactions And Services:" Chatbots as a produced information, communication and negotiation channel which makes possible for the businesses to extend their target audience by the means of messenger apps like Facebook, WhatsApp or WeChat. Brand new chatbots evolution in customer services and sales are exceptional. For example in the process of booking tickets, to find our destination when we plan for a field trip and all [9].

Papathanassis Alexis et al. proposed a paper: "R-Tourism: Introducing the Potential Impact of Robotics and Service Automation in Tourism:" Both Artificial Intelligence and Robotics are anticipating extending their 'tipping points' above the decade. Service automation and digitalization are previously seen in the tourism section. Innumerable application examples and instance of those technologies all over the complete holiday value-chain are defined and their dispersal drivers are dicussed [10].

Xiaojun Shen et al. proposed a paper: "Enhancing e-Commerce with Intelligent Agents in Collaborative e-Communities:" In this paper, we present the planning and enactment of an interdisciplinary research project including a quick-witted agent-based substructure for cooperative ecommerce applications. This architecture will not only allow appeal agent technologies in paperback manners, but it will also assimilate privacy law and codification into its technical scheme [11].

Alexander Maedche et al. proposed a paper: "Advanced User Assitance System": Information technology (IT) potentiality is increasing at a magnificent pace, but the cognitive aptness of the users is not growing at an identical speed. Thus there is an interstice between the IT which is available and the abilities of the users. There is an experience proof that supports structures intentionally on the contrary [12].

Anand Nayyar et al. proposed a paper: "Virtual Reality (VR) & Augmented Reality (AR) technologies for tourism and hospitality industry": whose intention is to call attention to top technologies for Tourism and Hospitality with consideration to AR and VR. Virtual Reality (VR) and Augmented Reality (AR) are considered as the most world-changing technologies of 21st Century [13].

Mariusz Krzysztof Żytniewski et al. proposed a paper: "Integration of knowledge management systems and business processes usingmulti-agent systems": This paper presents the concept of an

original solution ensuring integration of knowledge management systems and business process. The first part of the paper presents current research in the area of integration of software agents within business processes and the processes of knowledge processing. The second part presents the architecture of a software solution designed to support the modelling of business processes and improve these processes. The third part shows an example of using this architecture [14].

Ar<sup>-</sup>unas Miliauskas et al. proposed a paper: "An Approach to Designing Belief-Desire-Intention Based Virtual Agents for Travel Assistance": is to propose a Belief-Desire-Intention (BDI) architecture-based approach for a virtual agent design. The presented case of a chatbot assistant in a travel domain demonstrates the necessity of the BDI architecture modification. The approach is taken for multiple BDI agent instances with a shared external knowledge base [15].

Markus Berg et al. proposed a paper: "Website Interaction with Text-based Natural Language Dialog Systems": describes the extension of an existing web-based booking interface in the tourism domain with a natural language





### ISSN 2348 - 8034 Impact Factor- 5.070

interface. This allows the user to interact with the system in form of a written natural-language-based dialog. The main focus lies in a user-centered, intuitive dialog design, which allows the system to guide the user effectively [16]. Milan van Eeuwen et al. proposed a paper: "Mobile conversational commerce: messenger chatbots as the next interface between businesses and consumers": A research model is proposed based on the Technology Acceptance Model (TAM) and Innovation Diffusion Theory (IDT). Data is collected by means of an online survey among 195 participants. The proposed research model is tested by means of simple regression analysis and results are cross-validated using IBM Watson Analytics. All proposed hypotheses are supported [17].

Anita Nathania P et al. proposed a paper: "Android Based Chatbot and Mobile Application for Tour and Travel Company": Mobile Applications are rapidly growing segment of global mobile market. This paper involves an application for the android base operating system for a travel agent which will conduct booking transactions for train tickets, airline tickets, hotel, theme park, and tour. This application is integrated with a chatbot, instant messaging applications [18].

Eko Handoyo et al. proposed a paper: "Ticketing Chatbot Service using Serverless NLP Technology": The contribution of this research is to conduct some scenario that happening in ordering tickets. This research conducts that chatbot can help acts as customer service, based on the conducted scenario and show an F-measure score of 89.65% [19].

Bibek Behera et al. proposed a paper: "Chappie - A Semi-automatic Intelligent Chatbot" : Presently Chappie is being used as a routing agent wherein it can classify the requirement of user into one of the services provided by business based on the first few chats and then transfer it to an agent expert in that service. It uses natural language processing (nlp) to analyse chats and extracts intent of the user with a score similar to the likes of WIT1. Then it uses this information and AIML(Artificial Intelligence Mark-up Language) to make a conversation with the user. This is the marked difference between Chappie and existing chatbots like ALICE(Shawar and Atwell, 2003), which work solely on AIML [20].

# III. PROPOSED CHATBOT

Airlines are using bots to deliver boarding passes and other itinerary information to their customers. The latest innovations automatically check your airline ticket to see if your fare has dropped and then negotiate a refund. Online travel agencies are using them to help travelers find better deals on their itineraries.

The airline industry is one marked by fierce competition and a reputation for lackluster customer service. It seems that every day brings some new story about delayed flights or rowdy customers. With prices between competing airlines varying only slightly, service and experience is a significant differentiator. Often, it can be the difference between creating a loyal customer and creating one who spreads their poor experience to other potential passengers.

Chat bots have presented themselves as a forward-thinking and capable way of elevating the experience of flying commercial. While applications (detailed below) vary widely by airline, it is undeniable that these chat bots have arrived—and are not going anywhere anytime soon.

#### Answering common questions:

Even the most experienced traveler has questions to ask their airline. What gate does my flight depart from? What is the weight limit on checked luggage? When is the next connecting flight to Chicago?

In the past, these types of questions had to be handled by calling an airline. Doing so is inconvenient and eats up more of the customer's time than necessary, creating a negative experience that both parties would like to avoid. At the same time, airlines must pay humans to answer calls and field these relatively simple questions. Or, customers could navigate to the airline's website and spend a few moments searching around this unfamiliar space for the information they require.





### ISSN 2348 - 8034 Impact Factor- 5.070

Neither of these scenarios are optimal for the customer or the airline. They take up time, require undue effort, and increase costs. To resolve this, airlines such as Mexico's *Volaris* has created a Facebook Messenger <u>chat bot</u> capable of understanding and responding to hundreds of user questions. The chat bot answers questions at the rate of two humans, delivering answers more efficiently while also lowering customer service costs for Volaris. Since some questions regarding air travel are by nature complex, the chat bot is also capable of seamlessly transferring a user to a human agent to ensure they get the information they need promptly. Booking and sales:

As messaging platforms such as Facebook Messenger become increasingly more supportive of chat bots, they are able to perform more complex tasks such as handling booking and payments. This gives users the opportunity to get the information they need without having to leave the Messenger platform.

An early mover in this sense is Icelandic airline *Icelandair*. Built in the Messenger platform, the <u>Icelandair chat</u> <u>bot</u> provides users the opportunity to search for and book a flight in a text-based conversational fashion. Rather than drop down menus, users enter the information themselves. This gives them more control over how the flight is booked. It also keeps the conversation in a thread so that they can later review their purchase and search information with ease.

#### Consolidating information:

Without chat bots, details critical to your flight end up spread across your digital ecosphere. Your ticket purchase information stays on the website where you bought the tickets. Your confirmation stays in your email inbox. Your boarding pass is stored in your phone's Passport or physically printed and carried. Your flight updates are sent via text message. Altogether, this makes keeping track of this info extremely difficult.

A full-stack chat bot such as that used by Dutch airline <u>KLM</u> allows you to store all critical flight information in one place: Facebook Messenger. Passengers can access their boarding pass, booking info, and flight details seamlessly. Plus, the chat bot is also capable of answering questions about your flight rapidly. It sports much of the functionality of an app, without the need for an actual download.

Additionally, the chat bot is able to actually make edits to your trip. If you are looking to change seats, a request can easily be sent via the chat bot. Once it is confirmed, the updated ticket will be sent directly to you through Messenger. So a change that would previously have required the involvement of a customer service agent, as well as a website and email, has been swiftly streamlined into a single channel. Both the airline and the passenger save time and money, delivering the optimal flying experience.

There are two likely paths for airline chat bots moving forward. It's important to note that these are not mutually exclusive. These include:

#### More robust builds

Only a few airline chat bots fulfill a full load of operations. Some focus on booking, while others are more FAQ-focused. It's likely that once these companies start to see that their single function chat bot is working well, they will begin to build in other, more complex features. Air travel is an incredibly competitive field, with limited ability to differentiate on price. Therefore, airlines are constantly searching for opportunities to take the lead in creating the absolute best experience for their customers.

#### Proliferation to other platforms

At the moment, most airline chat bots exist in Facebook Messenger. There are a few reasons for this.

First, the Messenger platform is technologically advanced and offers a plethora of tools and capabilities to chat bot builders. It seeks to be as functional as anything you can access on a traditional website. Simply, it allows developers to offer a better experience to users.





### ISSN 2348 - 8034 Impact Factor- 5.070

Second, Messenger has an enormous amount of traction. At this moment, Messenger has 1.2 billion users spread across the world. The prominence of the platform makes it more likely that users will have access to that platform where there chat bot lives.

Once airlines have built more robust chat bots, it is likely that they will seek to expand to other platforms such as Twitter, Skype, or Kik among others. The messaging platform of choice is largely driven by what is popular in the user's specific location. Airlines can grow by adding their chat bot to platforms which are heavily used in areas they are looking to focus on. For example, WeChat is enormously popular in China. How does my airline get on board?

Chat bots are significantly simpler and faster to build than applications. That means that a well-organized, nimble airline can have a chat bot up and running in no time. Chat bot building platforms such as <u>Snatch Bot</u> allow you to create a powerful chat bot that'll take your airline to a higher altitude of customer service.

The 6 steps to peak performance:

#### Happier customers:

Bots mitigate the frustration of customers with real-time responses to their queries and by reducing waiting time. They also enhance the self-service experience and prevent any possible miscommunications.

#### Information at one place:

Chat bots for airlines make it easy to track all critical flight details. Using them, the passengers can keep details such as boarding pass, flight updates ticket purchase information etc. at one place.

#### Conversational interface:

Equipped with natural language processing and machine learning capabilities, chat bots can understand contextual references and drive a conversation with the customers in a human-like interaction.

#### Process efficiency:

Chat bots can bring in more accuracy by automating numerous mundane tasks and cutting down the scope for human-errors and raising an alert when human support is needed.

# Cost efficiency:

Intelligent workflows result in optimum utilization of resources and prevent the need for a high headcount. Thus chat bots help in bringing down the cost of operations phenomenally.

#### Competitive edge:

Exceptional customer service gives you a distinct reputation in the market, pulling more customers to you and improve customer loyalty. Therefore, you can get a competitive edge with bots.

#### Building an Airline Bot

The chat bot built is an Airline Bot. An Airline bot was built using few basic enquiries and details where a drop down was given listing few places where the passengers get to select or choose the place where they want to visit. As soon as the destination is choosen the bot displays the details regarding the place and will give the available flight timings in which the passengers got to choose the timings with which they are comfortable. The cost of the ticket is also shown on the screen. If they are ok with it then the bot will ask the passenger to mention their full name and their mobile number which is linked with their bank account. The required number will be debited from the person's account and the process of booking flight tickets is then successful. The bot will forward the required details later to the customer.

So, we can say that Airlines using chat bots ahead over their competitors by providing a better customer service. The main objective of building an Airline Bot is that it is easily accessible by all the online airline services and can make the work of the customers very easy. Usage of these chat bots will make us to cut short our time when we want to





#### ISSN 2348 – 8034 Impact Factor- 5.070

book tickets. It is definitely a stress free activity for the people who are engaged in their daily work. We all can use Airline Bots and can also promote others to use it.

# IV. RESULT & DISCUSSION

When comparing common touristic web portals one can identify many similarities. The following attributes exist on nearly every website:

Earliest possible begin of journey & latest possible end of journey

Trip length Age of children (implicitly number) & number of adults

Destination

Chat bots allow customers to get in contact with companies whenever they want so, without paying attention to time zones, opening times and waiting loops of call and service centers. The chat bot knows its users like a good friend and offers them appropriate offers, solutions and services at the right time.

Chat bots change the way of informing, communicating and transacting between the company and its customers or other external stakeholders.

The accuracy of the Question and Answer session is incredible. Using chat bots, consumers and businesses can communicate 24 hours day, 7 days the week, independent of working or opening hours.

Chat bots make our work easy and simple in knowing the exact details about our trip plan, the only thing we need to do is visit the correct site of the airline booking chat bots.

There are several types of assistants for each and every task involved in the process of booking tickets who respond properly to our questions.

The language which is used in the means of communication is natural and understandable.

The internal chat bots help in upcoming organization, cooperation in the premises of the company.

Permanent events and touristic information about the cities and the areas are provided.

New opportunities for cross-selling activities in public transport.

Reservation management made easy.

Disadvantages of the bot:

Inability to Understand – Due to fixed programs, chat bots can be stuck if an unsaved query is presented in front of them. This can lead to customer dissatisfaction and result in loss. It is also the multiple messaging that can be taxing for users and deteriorate the overall experience on the website.

Increased Installation Cost – Chat bots are useful programs that help you save a lot of manpower by ensuring the alltime availability and serving to several clients at once. But unlike humans, every chat bot needs to be programmed differently for a new business which increases the initial installation cost. This also increases the time needed to prepare for the program and plan everything effectively. Considering the last-minute changes that can always happen, this is a risky investment as updating the program will invite added costs to it.





### ISSN 2348 - 8034 Impact Factor- 5.070

Another important topic for both providers and users is *data protection*. If companies offer a stand-alone chatbot app, they are responsible for protecting and handling customer data adequately. This can turn into a disadvantage if proper steps are not taken.

Poor Memory – Chat bots are not able to memorize the past conversation which forces the user to type the same thing again & again. This can be cumbersome for the customer and annoy them because of the effort required. Thus, it is important to be careful while designing chat bots and make sure that the program is able to comprehend user queries and respond accordingly.

Customers could become frustrated as many bots work for a limited data base, they can't improvise. In other words, if they get confused, the conversation could run in a circle. That can lead to customers who become frustrated.

Complex chat bots can cost more based on the purpose. Not all business can use chat bots, some businesses are far too complex for chat bots to be practical.

Applications : Reservation / purchase of event tickets. Booking of hotel, trip and flight tickets. Customer service. Ease to plan a trip according to the tickets available. A popular use of chat bots is to deliver updates and offers based on consumer's preferences and history. Companionship is a remarkable application.

Content delivery of the chat bots is generally appreciated as they indulge completely in what are the users expecting from them and will try to satisfy them always.

# V. CONCLUSION

Airline bot will assist in friendly user experience by getting immediate support from the machine. It will diminish the stress in customer service. Programmed alerts will help in dangerous cases. Reactive time for the question is negligible and precise. In near outlook, AI will present itself on a superior picture and will be included in our daily routine. There is a requirement to incessantly look for innovative thoughts for improvement and to develop in already set up research. The chatbot architecture amalgamates a language model and computational algorithm to follow information online contact connecting a human and a computer using common language. This computerized human to computer conversational plinths works optimistically to provide resourceful service in diverse fields to help humans.

By means of APIs like Government Services, Sports, Weather and News, the chatbot will be capable to respond to the queries exterior of its dataset and which are presently occurring in the real world. It is likely to assure information requirements on a large scale, tumbling users' time and endeavour and mounting competence and effectiveness of the process. In the upcoming years, we can picturise chatterbots as talking books for kids, chatterbots for foreign language instruction and training chatterbots overall.

Chatbots will alleviate the drawbacks people encounter in many aspects of work. The higher quality chatbots will use different features in different passes. As the chatbots has set the trend it has an effective role to play in business. The challenging task refers to complex chatbots and also depends on which they are designed but not the simple chatbot. The best quality of the chatbot is to be simple and should have the talent to understand easily.

Thus, chat bots are a thing of the future which is yet to uncover its potential but with its rising popularity and craze among companies, they are bound to stay here for long.





### ISSN 2348 - 8034 Impact Factor- 5.070

### REFERENCES

- 1. Jizhou Huang, Ming Zhou, Dan Yang. (2007). Extracting Chatbot Knowledge from Online Discussion Forums. International Joint Conference on Artificial Intelligence, 423-428.
- 2. AM Rahan, Abdullah Al Manum, Alma Islam. (2017, December). Programming challenges of Chatbot: Current and Future Prospective. Humanitarian Technology Conference, 75-78.
- 3. M.Dahiya. (2017, April). A Tool of Conversation: Chatbot. International Journal of Computer Sciences and Engineering, 5(5), 158-161.
- 4. Ayesha Shaikh, Geetanjali Phalke, Pranita Patil, Sangita Bhosale, Jyoti Raghawatan. (2016, November). A Survey on Chatbot Conversational Systems. International Journal of Engineeing and Computing, 6(11), 3117-3119.
- 5. Ulrich Gnewuch, Stefan Morana, Marc Adam, Alexander Maedche. (2018, November 28). Faster is Not Always Better: Understanding the Effect of Dynamic Response Delays in Human Chatbot Interaction. Association for Information Systems in Electronic Library, 1-16.
- 6. Zhuling Zhong, Jing Luo2, Mu Zhang.(2015). Understanding Antecedents of Continuance Intention in Mobile Travel Booking Service.International Journal of Business and Management, 10(9), 156-162.
- 7. Titta Jylkäs, Tytti Vuorikari, Mikko Äijälä, Vésaal Rajab. (2018, August). AI Assistants as Non-human Actors in Service Design. AcademicDesignManagementConference, 1436-1444.
- 8. Silvia Quarteroni, Suresh Manandhar. (2017). A Chatbot-based Interactive Question Answering System, 83-90.
- 9. Darius Zumstein, Sophie Hundertmark.(2018). Chatbots An Interactive Technology for Personalized Communication, Transactions and Services. IADIS International Journal on WWW/Internet,15(1), 96-109.
- 10. Papathanassis Alexis.(2017). R-Tourism: Introducing the Potential Impact of Robotics and Service Automation in Tourism. "Ovidius" University Annals, 17(1), 211-216.
- 11. Xiaojun Shen, Shervin Shirmohammadi, Chris Desmarais, Nicolas D. Georganas and Ian Kerr. (2006, February). Enhancing e-Commerce with Intelligent Agents in Collaborative e-Communities. University of Ottawa, DOI: 10.1109/CEC-EEE.2006.43.
- 12. Alexander Maedche, Stefan Morana, Silvia Schacht.(2016, August). Advanced User Assistance Systems. Business and Information System Engineering, 58(5), 367–370.
- 13. Anand Nayyar, Bandana Mahapatra, DacNhuong Le, G. Suseendran. (2018). Virtual Reality (VR) & Augmented Reality (AR) technologies for tourism and hospitality industry. International Journal of engineering and technology, 7(2.21), 156-160.
- 14. Mariusz Krzysztof Żytniewski. (2016 January). Integration of knowledge management systems and business processes usingmulti-agent systems. International Journal of Computational Intelligence Studies, 5(2), 180-196.
- 15. Ar<sup>-</sup>unas Miliauskas, Dal'e Dzemydien'e.(2018). An Approach to DesigningBelief-Desire-Intention Based Virtual Agents forTravel Assistance. Institute of Data Science and Digital Technologies, 94-103.
- 16. Markus Berg, Antje Düsterhöft.(2010). Website Interaction with Text-based Natural Language Dialog Systems. University of Applied Sciences: Technology, Business and Design,
- 17. Milan van Eeuwen. Mobile conversational commerce: messenger chatbots as the next interface between businesses and consumers. University of Twente, 1-15.
- 18. Anita Nathania P, Yulia, Vannesa Yuwono Putri.(2018 June). Android Based Chatbot and Mobile Application for Tour and Travel Company. International Journal of Culture Technology, 2(2), 21-29.
- 19. Eko Handoyo, M.Arfan, Yosua Alvin Adi Soetrisno, Maman Somantri, Aghus Sofwan, Enda Wista Sinuraya(2018). Ticketing Chatbot Service using Serverless NLP Technology. International Conference on Information Technology, Computer and Electrical Engineering, 325-330.
- 20. Bibek Behera. Chappie A Semi-automatic Intelligent Chatbot, 1-5.

