Literature Survey

Date	**19 october 2022**
Team ID	**PNT2022TMID51531**
Project Name	**AI based discourse for banking industry**
Maximum Marks	**2 marks**

1.	**Paper title**	Suhel, Sasha Fathima, Vinod Kumar Shukla, Sonali Vyas, and Ved Prakash Mishra. "Conversation to automation in banking through chatbot using artificial machine intelligence language." In 2020 8th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions)(ICRITO), pp. 611-618. IEEE, 2020.
	Problem definition	• Artificial Machine Intelligence is a very complicated topic. It involves creating machines that are capable of simulating knowledge. • The examination of some of the latest AI patterns and activities and then provides alternative theory of change in some of the popular and widely accepted postulates of today.
	Methodology/ Algorithm	NLP algorithms, deep learning algorithms, Artificial Intelligence Markup Language
	Advantages	• The bot helps the users feel that they are interacting with a human being. The bot responds very rapidly. • The system is easy to comprehend and handle.
	Disadvantages	The incomplete implementation of framework and development of chatbots.

2.	**Paper title**	Biswas, Debmalya. "Privacy preserving chatbot conversations." In 2020 IEEE Third International Conference on Artificial Intelligence and Knowledge Engineering (AIKE), pp. 179-182. IEEE, 2020.
	Problem definition	• With chatbots gaining traction and their adoption growing in different verticals, e.g. Health, Banking, Dating; and users sharing more and more private information with chatbots - studies have started to highlight the privacy risks of chatbots. • In this problem, we propose two privacy preserving approaches for chatbot conversations.
	Methodology/ Algorithm	Natural Language Processing (NLP), Searchable Encryption (SE)
	Advantages	This provides various security measures and privacy preserving techniques for chatbots.
	Disadvantages	The implementation of SEE scheme integrated with RASA that allow us to validate and benchmark both proposed solutions is difficult.

3.	**Paper title**	Godse, Neha Atul, Shaunak Deodhar, Shubhangi Raut, and Pranjali Jagdale. "Implementation of chatbot for ITSM application Using IBM watson." In 2018 Fourth International Conference on Computing Communication Control and Automation (ICCUBEA), pp. 1-5. IEEE, 2018.
	Problem definition	The end user of Information Technology Service Management (ITSM) application in software companies has to keep on searching the solution for problems to generate a ticket since he cannot collaborate with the system by asking questions and getting relevant answers.
	Methodology/ Algorithm	IBM Watson Conversation API, Chatbot Plugin
	Advantages	• If the user is unsatisfied with the solutions provided by the chatbot, the ticket can be generated. • The chatbot also stores the conversations related to each different query so that it can be attached as a chat history in case of ticket generation.
	Disadvantages	The attachment of video and audio in the chat are needed.

4.	**Paper title**	Virkar, Mayuresh, Vikas Honmane, and S. Upendra Rao. "Humanizing the chatbot with semantics based natural language generation." In 2019 International Conference on Intelligent Computing and Control Systems (ICCS), pp. 891-894. IEEE, 2019.
	Problem definition	The introduction of approach made for improving the efficiency of the chatbot or artificial conversation AI entity used in various commercial and banking sector.
	Methodology/ Algorithm	Tokenization, Parts of speech tagging, NLP algorithms.
	Advantages	The bot model generates semantically similar sentence for a given sentence. Comparing the results, sentence embeddings generate more accurate similarity score for calculating the semantic similarity
	Disadvantages	The word can have much more criteria to be decided for the semantic representation of the sentence. So, sentence embeddings generate correct score as compared to the word embeddings.

5.	**Paper title**	Vamsi, G. Krishna, Akhtar Rasool, and Gaurav Hajela. "Chatbot: A deep neural network based human to machine conversation model." In 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT), pp. 1-7. IEEE, 2020.
	Problem definition	A conversation AI agent (chatbot) is computer software capable of communicating with humans using natural language processing. The crucial part of building any chatbot is the development of conversation
	Methodology/ Algorithm	NLTK algorithm, DNN algorithm.
	Advantages	• The research discovered that a chatbots' performance could be improved by using neural networks and different algorithms. • It is important to acknowledge the limitations like the accuracy of the model.
	Disadvantages	Investigation of other enhanced methods can be done, that would further raise the standards of chatbots are needed.