**Literature survey:**

**1.1**

The authors in [1] have given an introduce about the chatbots to its customers. The paper is a case study of chatbots and it’s impact in banking systems. Chatbots designed with AI are one of the most promising strategies of a banking business that can lead the bank to win the satisfaction vote of their loyal customers.

The authors have provided the details of the progress made by chatbots in Indian banking. Conducted a case study of HDFC and Kotak Mahindra Bank regarding the Chatbots usage. Established an insight into the views of various banks regarding the use of AI based techniques

There are limitations provided too. The dialogue capability is limited to very a very specific set or format of questions. Chatbots have significant limitations based on accents and languages. Not all consumers are familiar with or comfortable with chatbots. The expansion of chatbot capabilities is limited by the ability to hire trained teams or partner with organizations familiar with this rather new technology.

**1.2**

EBER chatbot was proposed in [2] and adapts its responses based on the user’s mood. It is trained with some selected Machine Learning algorithms from the Scikit-Learn Python library, Gradient Descent, Decision Tree and Random Forest, on some datasets. The NLG module employs SA knowledge to avoid monotony by adjusting the polarity of the dialogue depending on the polarity of user responses.

This chatbot combines AI, ML, NLG and SA to generate short coherent contextualised dialogues as connectors between newscasts. EBER behaves realistically as an ‘‘intelligent radio’’ for entertaining elderly people.

As it requires classification dialogue, more keystrokes to understand and learn, it is not predictable of giving right solution all the time.

**1.3**

In [3], the publishers try to identify the factors that influence the consumers’ intention to use the chatbot technology applied in the banking industry. The measurement development and hypotheses were based on the technology acceptance model extended with compatibility, customers’ perceived privacy risk and awareness of the service.

They have also highlighted the importance of perceived compatibility and perceived usefulness in the adoption of banking chatbot technology.

**1.4**

The authors of [4] have came up with a system which is implemented as a personal agent to assist students in learning Data Science and Machine Learning techniques.It aims at researching the application of cognitive computing in blended learning environments. It is a modular cognitive agent architecture for pedagogical question answering, featuring social dialogue, small talk, improved for a specific knowledge domain.

But this software needs more analyzing, creates some misunderstanding while conversations, which leads to unsatisfied customers.

**1.5**

Xatkit chatbot, a multi-channel and multiplatform chatbot modeling framework was introduced in [5], it proposes a set of domain-specific languages for chatbot definition from the technical details of the platform-specific aspects where the bot is going to be deployed.

Xatkit provides a set of Domain Specific Languages to define chatbots in general in a platform independent way. Xatkit also comes with a runtime engine that automatically deploys the chatbot application and manages the defined conversation logic over the platforms of choice. Xatkit’s modular architecture facilitates the separate evolution of any of its components.

At the language level it has to improve the variability of the bot specification, moving towards a product-line approach that enables companies to create and quickly update several versions of the same bot, to create a localized versions of the bot for each branch of the company. At the framework level, it can improve on the integration of chatbot generators, able to create partial bot specifications from existing data sources within the company.

**1.6**

The chatbot named as SOCIO, was made by the writers of [6], is a collaborative tool for creating class diagrams, building models and meta-models. The chatbot is accessible from Twitter or Telegram. The designers and stakeholders can take advantage of social network collaborativeness and ubiquity to perform lightweight modelling tasks.

Here, the experiments were ran to compare the usability of the SOCIO chatbot with a website named “Creately” in order to increase the reliability of the results of the baseline experiment.

They provided the analytics on the experiments that shows the usability of the SOCIO chatbot, and a list of suggestions from SOCIO chatbot users to understand the impact of three human-computer interaction and usability characteristics like effectiveness, efficiency, satisfaction on collaborative modelling and chatbot design.

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