AI BASED DISCOURSE FOR BANKING INDUSTRY

ABSTRACT

* The usage of artificial intelligence in banking is an important theme within entrepreneurial research. The purpose of the study was to analyse the motivations, challenges and oppor tunities for Swedish banking institutes to implement artificial intelligence based solutions into their customer service process. The research is based on a case study of the Swedish banking institute Swedbank AB, who introduced an AI based virtual assistant (Nina) to deal with customer requests.
* For the qualitative study, interviews with Swedish banking customer and experts were conducted. Further, to understand the managerial motivations of Swedbank, a theory of Moore (2008) regarding innovation management was applied. The findings display that Nina improved the service spectrum of Swedbank with the potential of decreasing costs, while maintaining customer satisfaction.
* Further, the results displayed a high acceptance of new technologies from the customer perspective. This provides the foundation for Swedbank to introduce further artificial intelligence based services. Banking institutes and other service oriented organisations with high customer interaction can use the implications of the thesis when considering to more effectively handle customer requests.
* Text-based chatbots are implemented in the financial sector to enhance the relationship between the customer and services provided by the sector, and also to address external challenges and customer requirements.
* The chatbot technology in the financial sector serves to examine customers' frequently asked questions and the representation of the process using machine learning. In light of this, this study presents a comprehensive systematic literature review of articles focused on text-based chatbots in the financial sector.
* It describes the understanding of chatbots in the financial sector in terms of Implementation, adoption intention, attitude toward use and acceptance; it also describes how people experience chatbots, specifically in terms of perception, expectation and trust, as well as how they are engaging and emotionally motivated; management of the security and privacy vulnerabilities of the chatbots; and identifies the potential strategies that can hinder the efficient, successful evolution of chatbots in the financial sector.
* Finally, the main findings regarding the use of text chatbots in the financial sector are presented; additionally, the open issues in current research are highlighted and a number of research opportunities that can be pursued in the future are suggested.

In this project, we will be building a chatbot using Watson's assistant.

This chat should have the following capabilities:

* The Bot should be able to guide a customer tocreate a bank account.
* The Bot should be able to answer loan queries.
* The Bot should be able to answer generalbanking queries.
* The Bot should be able to answer queries regarding net banking.

LITERATURE SURVEY

* The banking industry has been profoundly influenced by technological evolution in recent decades and consumer adoption of banking technologies is a widely researched topic in the literature. Thus, a more in-depth look into the processes behind the adoption of banking chatbots can be gained through the review of the existing literature on the adoption of other technologies applied in the banking sector, such as i-banking and m-banking.
* Several theories have been implemented in order to analyze the adoption of different IT systems. According to Hanafizadeh and Khedmatgozar (2012), the most influential theoretical models applied in i-banking adoption studies, are the Diffusion of innovation theory (DIT), the Technology acceptance model (TAM), the Decomposed theory of planned behavior (DTPB), the Extended technology acceptance model (TAM2) and the Unified theory of user acceptance of technology (UTAUT).
* The latter becoming dominant in the literature in recent years. Shaikh and Karjaluoto (2015) analyzed and synthesized existing studies of m-banking adoption and concluded that the most frequently used adoption models were TAM, followed by DIT and UTAUT, while several studies applied a combination of different technology acceptance models (e.g. TAM and DIT). Several of the above mentioned models are composed of intention to use or actual usage as the dependent variables.
* Consequently, the key dependent variables in the i-banking adoption literature (Yousafzai, 2012) are behavioral intention to use and actual usage of the technology, while in m-banking adoption, besides the two earlier mentioned dependents, attitude is also adopted in order to analyze technology acceptance (Shaikh and Karjaluoto, 2015).
* Based on the literature review, it could be concluded that usefulness and ease of use are fundamental variables in studying technology acceptance in the banking sector. It should also be highlighted that compatibility was found as a key determinant for m-banking (Koenig-Lewis et al., 2010; Shankar and Kumari, 2016; Giovani 2019) and i-banking (Giovani set al., 2012) adoption. Therefore, it is expected that compatibility will influence banking chatbot adoption as well.
* However, technology acceptance could be inhibited directly or indirectly (Moldovan 2018) by several factors, such as different types of risk factors.

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