# LITERATURE SURVEY ON AI BASED DISCOURSE FOR BANKING INDUSTRY

## Introduction

The banking industry has moved towards digital adoption in recent years. Everything is getting digitized, whether small or big financial institutions. When digital channels are more widely used, the customers also have higher expectations from their interactions with the banks. Artificial intelligence chatbots are well equipped to enhance customer experience using digital communication channels.

The implementation of chatbot technology is evolving rapidly in the banking industry, yet customer acceptance is behind. The aim of the project is to build an efficient banking chatbot that answers the banking queries in a satisfactory manner.

**Exsisting Solutions:**

* The AI-enabled banking chatbots available can answer a range of queries related to bank accounts, debit and credit cards, fund transfers etc.
* Examples:
  1. Erica, by Bank of America
  2. Amex bot, by American Express
  3. EVA, by HDFC Bank
  4. Amy, by HSBC Bank(Hong Kong)
  5. Ceba, by Commonwealth Bank Australia
  6. Keya, by Kotak Mahindra Bank

**Drawbacks and its Limitations:**

* Available all round the clock
* All Day Customer service
* Naïve Bayes algorithm attempts to classify text into certain categories so that the chatbot can identify the intent of the user, and thereby narrowing down the possible range of responses.
* Distorted Voice and ambience noise
* This can be overcomed by training the system to adapt to such conditions, IBM Watson assistant provides better acoustic adaptability

## **Overcoming the drawbacks:**

* An issue with Naïve Bayes algorithm is that it uses a ‘bag of words’ approach. Essentially, the algorithm considers the words as an entire set and selects the most important ones to determine the class of input.
* SVMs work very well with text data and Chatbots because of the high dimensional input space due to large number of text features, linearly separable data and the prominence of sparse matrix.SVM is more efficient than Naive Bayes.
* IBM Watson assistant NLP engine provides a better human conversation environment.

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# Conclusion:

Robust and rapid processing needs, advent of mobile technology, data availability, and proliferation of open-source software offer AI a huge scope in the banking sector.

Though AI has been used in banking for decades, it remained unnoticed. In today’s app-driven world, the banking sector eyes on leveraging with the help of mobile app development companies.

In all these ways, AI in banking is continuing to transform the industry to provide a greater level of value to their customers, reduce risks, and increase opportunities as the financial engines of our modern

economy.

## REFERENCES:

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2. Monika Anetta Alt, [Banking with a Chatbot – A Study on Technology Acceptance](https://www.researchgate.net/publication/351579830_Banking_with_a_Chatbot_-_A_Study_on_Technology_Acceptance), April 2021.

Problem Statement

A cost effective solution that solves the banking queries of the customers and thereby helping them with their financial transactions and reducing the workload of the bank employees.To develop an efficient banking Chatbot using NLP and Deep learning to effectively curb out the following constraints :

* Answering basic banking queries regarding account creation, net banking, loan queries, etc..
* Guiding a customer throughout the entire process of account creation also giving out effective and instant responses.
* Understanding the Queries in a better way.
* The chatbot can seamlessly escalate queries to customer agents while providing them with all the necessary data to ensure that these issues are resolved appropriately and without having to make the customer repeat any information.