

AI Based Discourse For Banking Industry Using Watson Assistant

An Industrial/Practical Training Report

Submitted to the Faculty of Engineering of
**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA,
KAKINADA**

In partial fulfillment of the requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY In COMPUTER SCIENCE AND ENGINEERING

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)

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2021 - 2022



INTERNSHIP REPORT APPROVAL FORM

With immense pleasure, this is to approved that the students of Seshadri Rao Gudlavalleru Engineering College i.e.

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Successfully completed their Project and Project Report on “**AI Based Discourse For Banking Industry Using Watson Assistant**” under our guidance.

We are highly impressed with the work that they have done and commend them on their quick grasping skills. They have shown good intent to learn and have put the knowledge gained into application in the form of this project. We appreciate the hard work and commitment shown by them.

We, hereby approve that this document is completely checked and accepted by SmartBridge Technical Team. Its been an absolute pleasure to educate and mentor these students. We hope that this document will also serve as a Letter of Recommendation, to whomsoever applied.

We wish them success in all future endeavours and a great career ahead.

Jaya Prakash. Ch
Program Manager

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CERTIFICATE

This is to certify that the project report entitled “AI Based Discourse For Banking Industry Using Watson Assistant” is a bonafide record of work carried out by N. Madhavi(19481A05H1), M.Umamaheswararao(19481A05D7), M.Deekshasindhu(19481A05E6), P.V.S.S.G.Purnanandasarma(19481A05H9) under the guidance and supervision of Mrs. G. Keerthi in partial fulfillment of the requirements for the award of the degree of Bachelor of Technology in Computer Science and Engineering of Jawaharlal Nehru Technological University, Kakinada during the academic year 2022-2023.

Project Guide
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ABSTRACT

Banking bot is an artificial intelligent development for banking operations, which can understand people queries and responds accordingly. The main aim of this project is to develop a banking bot using artificial intelligent algorithms which should be able to analyse and understand user's queries and react accordingly. For any banking related queries we have to go to the bank or call to customer care. It takes lot of time and effort and bank people are also very busy to attend our queries. On the other hand we don't get complete information from the customer care executives. It will be more suitable if we can directly post our queries online or chat with the bank people and get the response within less time. To overcome this problem we proposed banking bot where people can directly chat with a bot and they can integrate all of their bank accounts into same bot account and access them easily.

CHAPTER-1

INTRODUCTION

1.1 INTRODUCTION

In today's banking services, the customer service suffers from long waiting lines, long response times, and viewing only online content. In this situation, the customer service is being devalued, and businesses and individuals are seeking new ways to interact with customers in more effective way.

It is high time use a chatbot in banking to provide excellent service and products personalization.

to help customers and employees with every day tasks within banking. Banking language is complex and our chatbot is able to handle all possible situations.

It allows the customer to check accounts or apply for cards or insurance, to access their information without having to visit their branch.

it can run customized lead-generation campaigns, provide 24/7 customer service, and collect customer feedback.

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Banking has become the part and parcel of everyone's life. Almost everyone uses the banking sector to perform their tasks. Most of the tasks are been carried out manually. Now the use of mobile and internet banking facility has reached greater heights. Chat bots is becoming trending today. They are computer programs that interact with users using natural languages. In this project we are trying to perform few of the basic banking operations via chat bots. Now bots in banking sectors are only used to give guidelines but in this bot, we perform banking operations for a list of few banks.

1.2 Objective:

- 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 to create a bank account.
- The Bot should be able to answer loan queries.

- The Bot should be able to answer general banking queries.
- The Bot should be able to answer queries regarding net banking.

2.LITERATURE SURVEY

2.1 Existing Problem:

- Limited working hours of banking system cannot able to finish all customers doubts at a time.
- In order to get the required information, anyone should stand in a queue for hours in a bank.
- Simultaneously solving all customers problems is not a possible in banking system as the bank is managed by limited number of employees.

2.2 Proposed Solution:

Chatbots in Banking industry can speed up this process by assisting users to set up their accounts more quickly as well as providing them with suggestions on how they could improve their money situation and saving habits through topic-related suggestions tailored to an individual user.

To see **Benefits for AI Chatbots in Banking**, let's assume a customer calls the bank's customer support, his/her conversation is delivered to the chatbot by the bot manager and the synthetic conversation is being managed. After gathering all the information, the chatbot responds with appropriate answers that reduce the workload on the employees.

Let's have a look at the problems that a chatbot can solve for banking industry:

- Automate customer support
- Handle numerous customer interactions at a time
- Assist customer queries 24/7
- Outbound call optimization

- Helps in Lead generation

Moreover, **An Intelligent Chatbot for Banking System** can also be an excellent solution for resource costs as using chatbots in this case can eliminate the need for several employees to attend multiple customer calls at a time.



There are several programming languages that can be used for developing chatbots for mobile or web apps. These languages include, for example, PHP, Java, Ruby, Closure, and some others. However, Python tends to excel in this area due to its impressive set of advantages and an extensive set of libraries and frameworks. More importantly, Python also has a number of useful [libraries for machine learning](#) to combine with language processing.

3.THEORITICAL ANALYSIS:

3.1 Block Diagram:

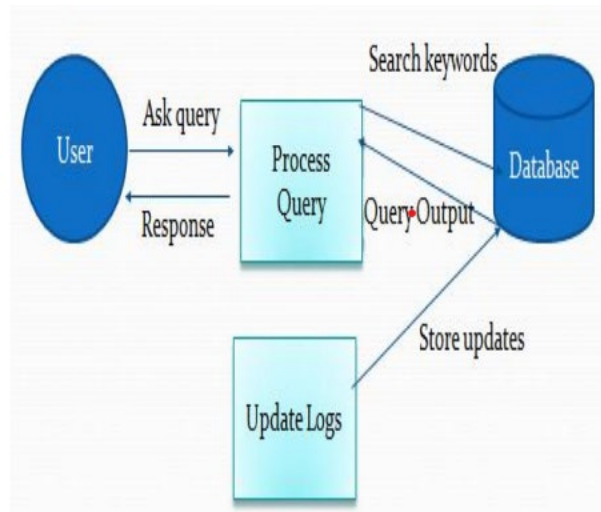
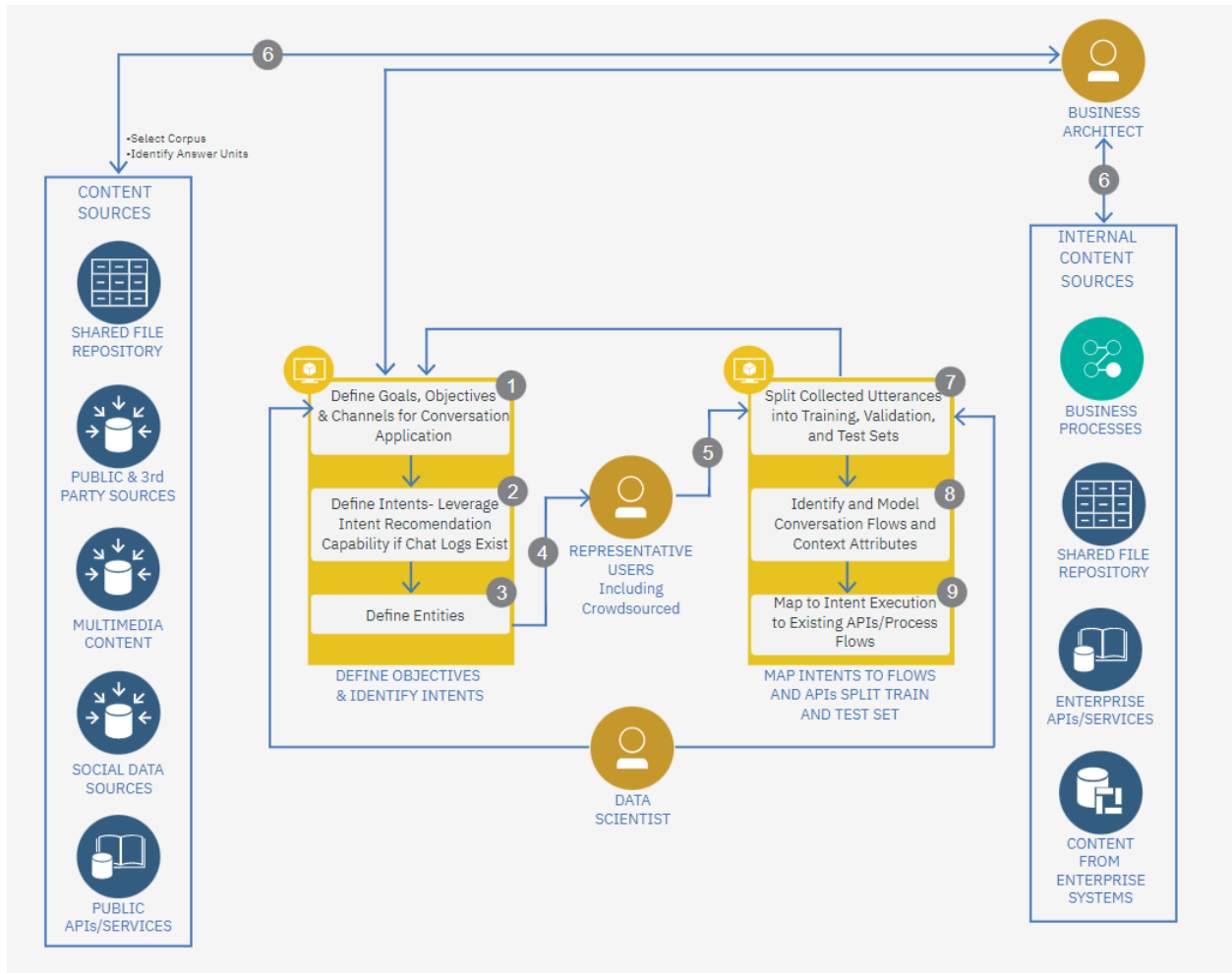


Fig 1: Block diagram

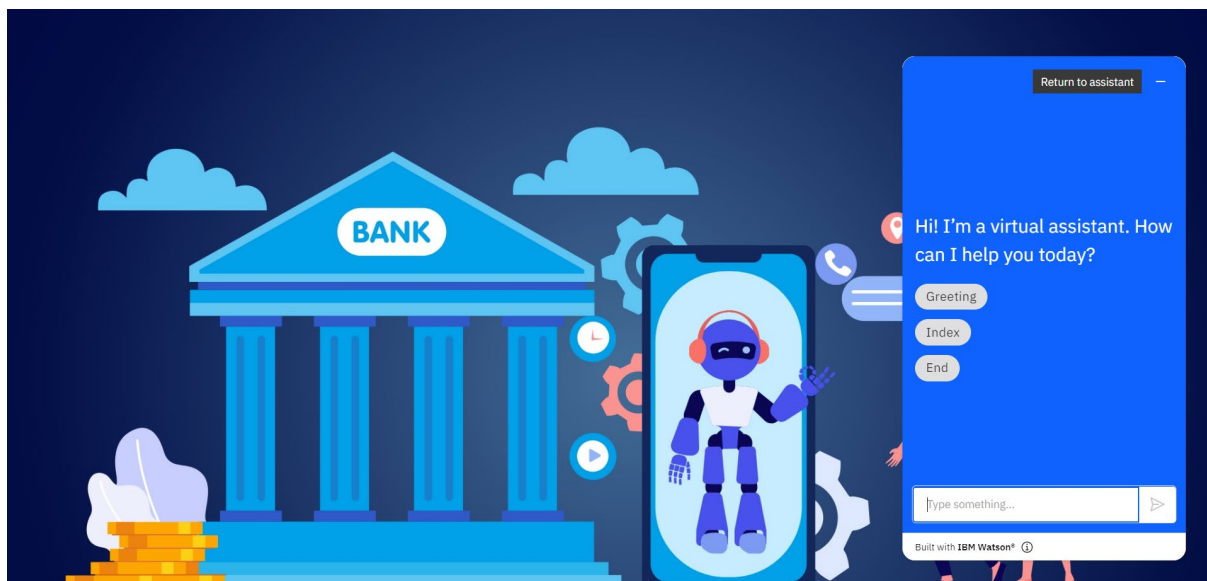
3.2 Hardware / Software Designing:

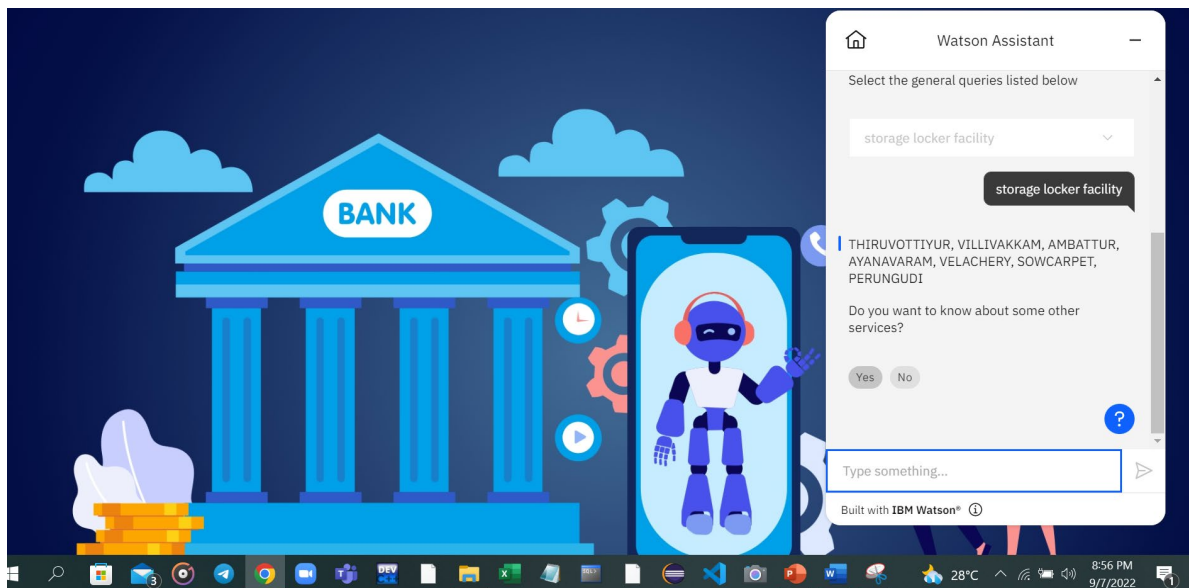
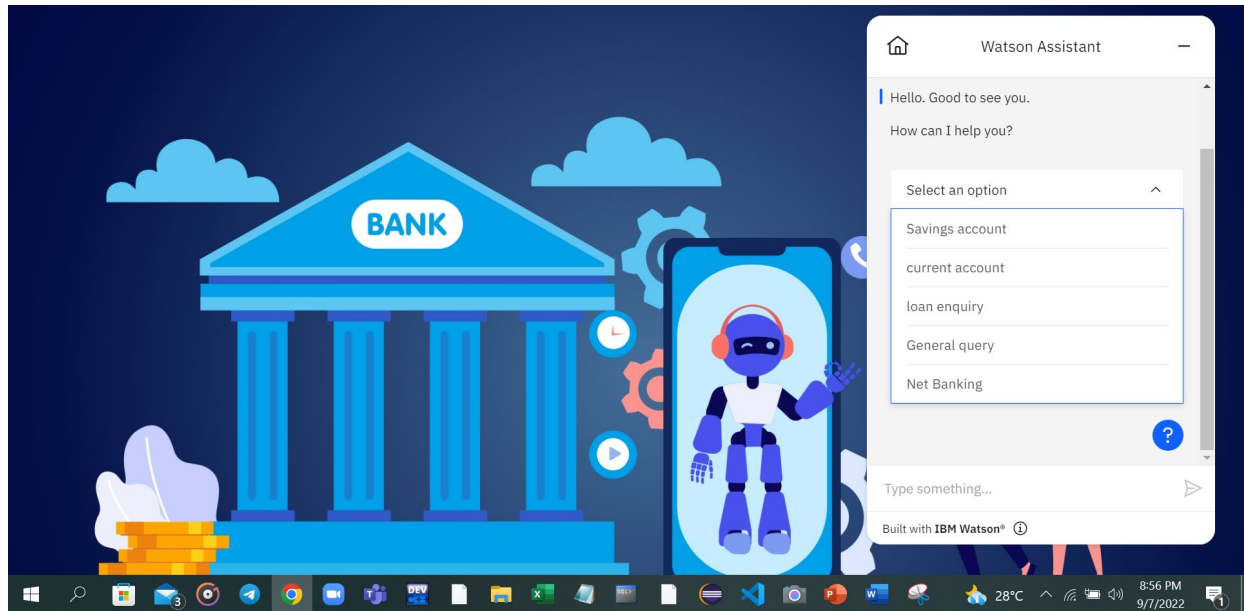
- System consisting of Windows 7,10,11.
- System RAM minimum consisting of 4gb and above.
- Processors of i5, i7, i9 are compatible with Watson Assistant.

4.FLOWCHART:



5.RESULT:







6.ADVANTAGES:

- Safety of Public Wealth.
- Availability of Cheap Loans.
- Propellant of Economy.
- Economies of Rural Scale.
- Development in Rural Areas.
- Global Reach.
- Automate customer support.
- Handle numerous customer interactions at a time.
- Assist customer queries 24/7.
- Outbound call optimization.
- Helps in Lead generation.

7.DISADVANTAGES:

- Chances of Bank Going Bankrupt
- Risk of Fraud and Robberies
- Risk of public Debt

8.APPLICATIONS:

Chatbots deliver a very high ROI in cost savings, making them one of the most commonly used applications of AI across industries. Chatbots can effectively tackle most commonly accessed tasks, such as balance inquiry, accessing mini statements, fund transfers, etc. This helps reduce the load from other channels such as contact centres, internet banking, etc.

9.CONCLUSION:

Artificial intelligence has many benefits to offer for the banking sector. Artificial intelligence is changing business processes and customer-facing services in the banking sector in India. It is also being used to meet regulatory compliance, detect fraud, and assess individual creditworthiness. The application of AI has the potential to create more efficient business processes, offer personalized services, and assist in larger goals such as financial inclusion. There is no doubt that the recent push towards digitalization is rapidly influencing the traditional banking models. However, it has also exposed the institutions to increasing cyber security threats and vulnerabilities. The banks are increasingly looking at emerging technologies such as block chain and analytics in creating an active defence mechanism against cybercrimes.

Artificial Intelligence has numerous advantages to offer for the financial segment. Based on the findings, it can be concluded that Artificial Intelligence in Banking and Financial Services satisfying their clients or consumer's needs. Banking and Financial Services consumers have good awareness about Artificial Intelligence applications. Adoption of Banking and Financial Services AI in applications was highest followed by KYC/AML, Chatbots and Security Compliance and also helping to fulfil the customer demand faster and easier. The consumers more commitment from representatives to the banking and financial services by giving development innovative preparing to improve the AI procedures in the workplace. It is also being used to meet regulatory compliance, detect fraud, and assess individual creditworthiness.

10.FUTURE SCOPE:

FUTURE OF CHATBOTS IN BANKING: FORECASTS AND INSIGHTS

The share of banks that use AI solutions and chatbots in particular is constantly rising. As another factor, the use of smartphones and other smart devices is also a rapidly growing trend. These two driving forces determine the near future of artificial intelligence assistants in the banking industry.

More and more banks tend to integrate chatbots into their mobile apps. This is a convenient way to stay in touch with their clients and, at the same time, reduce the involvement of human personnel. According to estimations calculated by Juniper Research, in 2023, chatbot interactions will save 862 million hours for banks, which equals to \$7.3 billion cost savings worldwide.

The influence of digital technology is in almost all industries. It is not only redefining industries but also transforming the way businesses operate. Nowadays, every sector is evaluating options and adopting ways to compete in this tech-driven world. Thus, the question arises. How can the banking sector support more customers without increasing workforce expenses? Hence, it is challenging for the industries to match the individual demands of the customers. The level of expectations of today's customers is exceptionally high. Nowadays, customers are technologically savvy and assume the industries provide a pleasant and

comfortable customer experience. Also, same thing customers expect from the banking sector.

Therefore, to meet customers' expectations banking sector has spread its wings in retail, IT, and telecom fields. To help with services such as mobile banking, e-banking, and real-time money transfers. So, the main aim of AI in the banking industry is to assist the customers by keeping their preferences a priority. Additionally, AI plays an essential role in assuring that customers are happy with the services offered by the bank. Furthermore, AI or machine intelligence helps the bank to understand the expectations of the customers.

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