1. Summary

The subject of this study is intelligent chat bots, or virtual assistants that can comprehend natural language questions and reply in a way that seems like a genuine human discussion. These chatbots are intended to assist in a variety of settings, including banks, customer service departments, and help desks, where human support might be insufficient or time-consuming. These chatbots' main objective is to improve customer service quality and efficiency by enabling users to communicate with them in plain English and obtain pertinent answers to their questions.

Customers engage with a chatbot rather than a live person in the proposed system, which attempts to mimic the customer care experience.Numerous facets of daily life, such as customer service centers, help desks, and phone answering systems, may be impacted by this technology.

1.1 Purpose

By giving consumers quick and easy access to information and help, chatbots are intended to improve customer service, decrease pointless questions, boost efficiency, and ultimately improve the banking experience for everybody involved.

1.2 Contribution

AI-based chatbots have several benefits, such as increased flexibility in managing a variety of dynamic data, a decreased reliance on hard-coded rules, and greater natural language comprehension through NLP and machine learning methods, which increases their efficacy in responding to intricate user inquiries.

1.3 Methodology

The methodology involves preparing a dataset, performing pre-processing, and vectorization of textual data, followed by classification using a learning model. The model is then tested, and the best approach is chosen for query mapping and obtaining answers through techniques like cosine similarity.

1.4 Conclusion

The proposed system aims to establish an intelligent query-handling program that evolves over time through self-learning, enhancing customer service quality, reducing human workload, boosting productivity, and ultimately increasing customer satisfaction.

2. Limitations

2.1 First Limitation

Initial Training Data: Limited initial training data for the chat bot may lead to inaccuracies in responses and require continuous refinement.

2.2 Second Limitation

User Dependency on Technology: Some customers, especially the elderly or those with limited technology proficiency, may still face challenges using the chat bot, leading to a digital divide.

3. Synthesis

Widening the domain.Providing close suggestions.Intelligent representation of response images, links Combining semantic similarity along with cosine similarity.