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Understanding the Role of Conversational AI for Organizations: A Qualitative Study

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Abstract

In today's digital landscape, managing customer service, customer satisfaction, and employee work-life balance poses significant challenges for organizations. The rise of SaaS products has heightened the need for effective communication throughout the product lifecycle. This paper investigates the role of conversational AI in enhancing organizational interactions with customers and employees. Conversational AI has the potential to transform customer service, improve satisfaction, streamline operational processes, and support employee efficiency and work-life balance. Conversational AI could significantly alter communication methods and product delivery as the world increasingly shifts towards digitalization, automation, and data-driven decision-making. The study utilizes evidence from reviews, personal correspondence, surveys, and diaries to illustrate how conversational AI can enhance customer service, reduce operational time and costs, and boost overall satisfaction. Data were collected through structured interviews with representatives from ten companies, providing insights based on their industry experience and perspectives. The findings highlight conversational AI's potential benefits and applications in modern business contexts.

Keywords

Conversational AI, Artificial Intelligence, Customer Satisfaction, Customer Service, Machine Learning, Natural Language Processing, Voice-bots, Chatbots, Data Science, Organizational Change.

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1. Introduction

Digital transformation signifies the shift in business and societal practices driven by the adoption of digital technologies (Van Veldhoven & Vanthienen, 2023). This transformation is prevalent across various industries, including banking, transportation, manufacturing, education, retail, and healthcare. This paper examines the adoption of digital transformation within business and management practices and its impact on organizations. A survey conducted by Bloomberg and the Harvard Business Review revealed that 74% of chief executives—including office managers, CEOs, and project managers—considered digitization crucial for business survival (Van Veldhoven & Vanthienen, 2022). Despite acknowledging digitalization as essential for revenue and profit growth, only 36% of organizations have fully integrated new technologies into their infrastructure. Digital transformation necessitates a shift in how organizations interact with customers, employees, and suppliers, making each stakeholder integral to the transformation process. This transformation fundamentally alters communication strategies with stakeholders and the handling of technology. With customer experience increasingly prioritized, especially by customer service teams, digital transformation is now seen as a critical aspect of modern business practices (Van Veldhoven & Vanthienen, 2023).Many companies rely on outdated methods and fail to leverage new technologies. To maintain competitiveness in today's market, businesses must upgrade their operations (Karagiannakis et al., 2023). This paper explores the significance of digital transformation and its potential effects on a company's performance transformation for success, the steps involved in the transformation process, the benefits of effective

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Change management, and resources for further learning about digital transformation (Van Veldhoven & Vanthienen, 2023). Recent evidence suggests that the value of digital transformation is considerably enhanced when new technologies are applied across industries with a high demand for innovation, highlighting its importance in improving efficiency and profitability (Teece, 2023). Additionally, digital transformation can enhance workplace satisfaction by helping employees realize their full potential.

This paper also examines the impact of digital transformation across different sectors, including healthcare, banking and finance, and manufacturing. Customer support has evolved from merely answering queries and providing guidance to leveraging instant messaging and web chat tools (Uzir et al., 2021). Modern tech support no longer involves one-sided problem resolution; customers now express dissatisfaction through social media or online reviews if their needs are not met promptly (Miao et al., 2022). This shift emphasizes the importance of engaging customers where they are most active. Social media usage has surged, with businesses of all sizes establishing profiles on platforms such as Twitter, Facebook, LinkedIn, and Pinterest (Lou et al., 2022). The significance of social media lies in its extensive reach and its role in enabling direct interaction between companies and their customers (Ginting et al., 2023). High customer satisfaction is crucial for any business, contributing to customer retention and loyalty (Eckert et al., 2022). Effective management involves maintaining customer satisfaction to capitalize on new opportunities and ensure repeat business (Khan et al., 2022). High satisfaction can differentiate between a one-time sale and a long-term customer relationship (Dam & Dam, 2021). Attention to customer service details can increase sales and enhance customer loyalty.

Previous research has explored various AI technologies (Caldarini et al., 2022; Dolbir et al., 2021; Mathew et al., 2021; Siraj et al., 2022; Vorisek et al., 2023). One study addressed the gap in knowledge about conversational AI, highlighting its potential beyond basic IVR systems to more sophisticated interactions (Zhang et al., 2021). Another study focused on privacy and security issues related to conversational AI systems, emphasizing the need for research on protecting sensitive data (Zhai et al., 2021). Research has also explored the adaptation of conversational AI to cultural differences, suggesting the need for systems that can function effectively across diverse cultures and languages (Gehrmann et al., 2021). Additionally, there is a call for research on human-AI interaction to ensure natural and effective communication, especially in emergencies (Reinkemeier & Gnewuch, 2022). Studies have also examined the responsiveness of voice bots and the integration of conversational AI with other technologies, such as the Internet of Things (IoT), augmented reality (AR), and virtual reality (VR) (Du Preez et al., 2021; Mateescu, 2021). This study aims to develop an advanced voice bot capable of efficient customer interaction, providing precise solutions, and offering a human-like experience rather than a basic IVR system. The research is structured to present a clear understanding of the problem, the research methodology, results, and recommendations. The first chapter introduces the research background, gap, and relevance. The following chapter discusses conversational AI implementation, best practices, and relevant academic literature. The subsequent chapter details the research methodology and presents the results. The final chapter concludes with a summary of findings, study limitations, and suggestions for future research.

Figure 1: Research Outline

2. Literature review

2.1. AI Developments

2.2.1. Chatbots: the foundation of conversational AI

The concept of conversational AI originated with the introduction of chatbots. Early chatbots were used primarily for entertainment, allowing users to converse casually with virtual entities. However, businesses quickly recognized the potential of chatbots for various applications, such as customer support, financial planning, and content management (Caldarini et al., 2022). One of the main challenges with chatbots has been balancing functionality with user privacy. Legal frameworks exist to regulate the handling and storage of data from private conversations (Ehrenpreis & DeLooper, 2022), but the interpretation and application of these regulations can still be unclear. Though chatbots have become more familiar to users, they remain limited in understanding complex human emotions or thoughts (Dolbir et al., 2021). Early chatbots were rudimentary and operated based on keywords, offering limited interaction and lacking the ability to understand context. Initially, chatbots were designed for entertainment, allowing users to provide basic personal information and engage in superficial conversations. Their role was restricted principally to providing lighthearted interaction with little practical use. However, their deployment for business use cases, while requiring human oversight, laid the groundwork for developing more advanced conversational AI systems (Karagiannakis et al., 2023).

2.2.2. Advancements toward conversational Al

Conversational AI represents a newer approach to artificial intelligence, designed to facilitate meaningful interactions with humans by understanding natural language and contextual intent (Ruane et al., 2019). Though still in its early stages, conversational AI holds significant potential for personalization and complex problem-solving. These systems are designed to interact with humans more naturally, learning from interactions to improve their ability to understand context and respond appropriately. Conversational AI can be utilized in a variety of applications, from personal assistants and customer service to educational tools such as teacher assistants and tutors (Ping et al., 2020). The personalization capabilities of conversational AI enable systems to adapt to individual users, delivering more relevant and accurate information. This human-like interaction sets conversational AI apart from traditional chatbots, making it a key player in areas requiring a more personalized touch. Engaging in natural language processing (NLP) also makes it easier for users to interact with the system in a natural and intuitive way.

2.2.3. Core technology in conversational AI models

Recent advancements in neural networks have enhanced the ability of chatbots to simulate human speech and improve their learning capabilities (Nuruzzaman & Hussain, 2018). These developments have led to increased adoption of AI in everyday interactions, such as voice-activated virtual assistants and AI-driven customer service systems. A typical conversational AI model integrates natural language processing (NLP) with machine learning (ML) to analyze and respond to user input. These conversational AI systems are part of a broader suite of technologies, including machine learning, natural language processing, and deep learning. Combining these technologies allows conversational AI to adapt to evolving user needs, improving its performance through continuous learning. This integration is crucial for developing systems engaging in dynamic conversations, responding accurately to various queries, and maintaining relevance across various contexts.

a) Machine learning

Insufficient data posed challenges in the past, but today's complex business landscape has shifted concerns towards managing an overwhelming amount of data. The vast data generated from multiple business operations has significantly altered analytical practices. Traditional methods have become less effective in handling the increasing data volume (Gao et al., 2019). These limitations have prompted

the development of advanced techniques with high capabilities to analyze and interpret large datasets. Machine learning (ML) has emerged as one of the most widely recognized artificial intelligence (AI) techniques. ML can provide insights to enhance productivity and analyze performance, identifying new factors influencing organizational outcomes (Mathew et al., 2021). AI integrates several technologies, including supervised, unsupervised, and reinforcement learning, each contributing to different facets of data analysis (DHL & IBM).

b) Supervised learning

Supervised learning algorithms form the foundation of machine learning methods. This approach trains models using labelled datasets, where each data point has associated features and a label. Typically, the dataset consists of multiple feature columns and a final column representing the label. The model learns to predict the label for unseen data by identifying patterns within the training examples (Cunningham et al., 2022). In conversational AI, supervised learning is used to train models for both natural language understanding (NLU) and natural language generation (NLG). For NLU, models are trained to identify the intent of user inputs by mapping sentences to corresponding intents using labelled examples. These examples consist of input sentences and their assigned intent, enabling the model to recognize patterns and relationships in the data. For NLG, supervised models generate responses by learning from input-output pairs, where each example includes an input context and the appropriate output response. The model learns to generate relevant responses by identifying patterns in the training dataset (Paz & Blanco, 2024).

Both NLU and NLG models can be trained independently or as part of an integrated conversational AI system. In basic terms, supervised learning models are employed when the desired output is already known, allowing the model to map input data to a predetermined outcome. Common supervised learning methods include linear regression, logistic regression, and decision trees.

c) Unsupervised learning

Unsupervised learning involves training a model on datasets without labelled outcomes, enabling it to discover patterns and structures within the data (Watson, 2023). In contrast to supervised learning, unsupervised algorithms operate without predefined labels, making them useful for tasks such as clustering, dimensionality reduction, and density estimation (James et al., 2023). This method provides less control over the output but offers insights into the input data's inherent patterns. Examples of unsupervised learning include clustering techniques like k-means and data visualization methods.

d) Reinforcement learning

Reinforcement learning is another key area of machine learning, distinct from supervised and unsupervised methods. In reinforcement learning, models interact with their environment, learning over time by receiving feedback as rewards or penalties (Haque et al., 2022). For example, a robot learning to walk might experiment with different step sequences, receiving rewards for successful outcomes. Over time, the model balances the exploration of new strategies with the exploitation of known successful approaches. Reinforcement learning is valuable for applications such as real-time decision-making, where systems can learn from continuous interaction. Typical examples include question answering, machine translation, and text summarization.

e) Natural language processing

Natural Language Processing (NLP) encompasses a wide range of disciplines, including linguistics, computer science, AI, and statistics. Recent technological advancements have made extracting meaning from human language easier, leading to various applications in NLP (Dolbir et al., 2021). One key aspect of NLP is Natural Language Understanding (NLU), which allows computers to interpret and engage with human language through both text and speech. While NLU has been around for some time, it remains challenging due to the complexities of human language. For instance, systems like Google Translate leverage large datasets of sentence pairs across languages to improve translation

quality, demonstrating the ongoing importance of NLU in AI research. It is essential to consider users' needs and communication patterns to develop systems that can accurately understand human language.

f) Natural language generation

NLG refers to the process of generating human-like text using rule-based systems, which differ from traditional methods such as statistical or phrase-based machine translation (Ehrenpreis & DeLooper, 2022). Unlike these older techniques, NLG systems are designed to produce coherent and fluent text. With the rise of machine learning and AI, NLG has emerged as a critical component of digital innovation in the 21st century. NLG utilizes algorithms to simulate human thought processes in order to produce meaningful content. One of the primary applications of NLG is in content creation for websites and social media platforms. Generative software can produce tailored articles, blog posts, and social media content that meets the specific needs of users seeking information.

Additionally, NLG is used for tasks such as composing business emails and helping organizations save time and resources by reducing manual effort. Another widely recognized application is automated translation (Dolbir et al., 2021). While many translation systems exist, most struggle with capturing conversations' full scope and contextual meaning. NLG enhances translation by allowing more flexible and context-aware outputs. For NLG systems to function effectively, computers must first understand human communication, which involves a complex system of symbols and language used to convey meaning. The way humans express thoughts and ideas can vary significantly based on the context, making NLG a challenging yet vital tool for understanding and replicating human language interactions. NLG systems aim to address this complexity by analyzing how humans communicate and incorporating that understanding into the generated text.

2.3. Importance of Conversational AI for Businesses

Recent advancements in artificial intelligence have significantly changed how businesses interact with their customers. Conversational AI has emerged as a key innovation that is transforming customer communication (Vorisek et al., 2023). Many organizations are adopting and integrating this technology into their operations to enhance customer engagement and satisfaction. For instance, a study conducted in India highlighted the use of AI-enabled HR applications by a global technology consulting MNE, which resulted in improved HR efficiency, enhanced employee experience, and reduced turnover. The research showed that AI bots in HR processes increased employee satisfaction and commitment (Malik et al., 2022). Conversational AI systems powered by advanced neural architectures can learn from real-time interactions, identify gaps, and adapt their responses accordingly. This leads to more personalized and accurate language models, which can be leveraged to refine marketing strategies, improve product offerings, and create tailored customer experiences. Additional benefits of conversational AI include operational efficiency, contactless and round-the-clock customer service, increased upsell opportunities, and reduced operating costs. Furthermore, AI-driven communication eliminates barriers, providing fast and accurate responses that enhance customer satisfaction, lead generation, and overall business performance. A comprehensive survey of same citation (Caldarini et al., 2022) explored the latest advancements in chatbot technology, demonstrating how AI and Natural Language Processing (NLP) have revolutionized virtual assistance across industries. Despite the progress, challenges and limitations remain, presenting opportunities for future research and development in chatbot capabilities. The combination of conversational agent design with cooperative principles and social response theory could further advance customer service, signaling the future direction of AI-powered interactions.(Ginting et al., 2023).

Table 1: Main studies on Conversational AI adoption

Article	Study Context	Key findings	Significance
(Ping et al., 2020)	Education	Reachable AI is an interactive system that uses advanced neural architectures to learn new language concepts from live interactions resulting in a more adaptive and personalized language model.	Identification of gaps, learning from live interactions, and managing teaching dialogues
(Dolbir et al., 2021)	Health	Advanced AI chatbots have transformed the healthcare industry by offering a cost-effective solution with improved safety, accuracy, and understanding.	Transforming the healthcare industry by offering benefits such as cost-effectiveness, improved safety, accuracy, and understanding.
(Caldarini et al., 2022)	Chatbot	This comprehensive survey explores recent advances in chatbot technology, including the revolution brought by AI and NLP, limitations, and future research and development paths.	Provides an overview of the current state of chatbot technology, highlights its recent advances and limitations,
(Croes et al., 2023)	Communication	Human and chatbot communication differ in meaningful ways despite the transferability of human language skills, as per the study comparing them along seven dimensions.	Unique characteristics of human and chatbot communication can inform the development and improvement of chatbot technology.
(Misischia et al., 2022)	Customer Service	Transform customer service with cutting-edge conversational agent design science research. Proposes solution using cooperative principle & social response theory. Discover the future of customer service.	Propose a solution for transforming customer service using cutting-edge conversational agent design science research.
(Malik et al., 2022)	HRM	A global technology consulting MNE improved HR efficiency and personalized employee experience through AI-enabled HRM applications.	The significance of AI-enabled HRM applications in enhancing HR efficiency and delivering personalized employee experiences.
(Ng & Tan, 2023)	E-commerce	This research found that the presence of AI chatbots did not significantly influence the customer experience in	Enhance personalization, perceived humanness, and social support.

		online shopping, but there was evidence of perceived humanness, personalization, and social support, offering practical implications for retailers. The study shows varying customer satisfaction among chatbot intents, with problem resolution being a key factor, which provides implications for improving chatbot user experience and future research.	Impact on customer satisfaction, with problem resolution being a significant factor.
(Ferraro et al., 2024)	Customer satisfaction		
(Dolbir et al., 2021)		The Alexa Prize competition drove innovation in NLP, Context Modelling, Dialog Management, and more, set free the potential of conversational AI by challenging university teams to build engaging social-bots and investing in cutting-edge technology to support their efforts.	Encouraging universities to develop engaging social-bots.
(Song et al., 2022)	E-Commerce	This study examines the impact of chatbots on consumers' decision-making and highlights the importance of perceived communication quality, privacy risk, and human interaction in shaping their adoption intention.	Communication quality, privacy risk, and human interaction are important in shaping their adoption intention.

2.4. Customer Satisfaction and AI Technology

Customer satisfaction plays a vital role in building a successful business. Meeting customer needs and expectations requires well-designed processes, and successful execution ensures positive customer experiences. AI technology offers a significant opportunity to enhance customer satisfaction by automating repetitive tasks such as product shipping, invoicing, and reimbursements while also optimizing engagement on digital platforms. This automation provides customers with faster, more accurate, and personalized services, which, in turn, fosters greater satisfaction and loyalty. Incorporating AI into customer service has been shown to improve the overall customer experience and improve business outcomes (Paz & Blanco, 2024). Additionally, voice assistants like Alexa, Cortana, and Google Assistant demonstrate the practicality of AI-driven customer service, helping businesses address staffing issues while providing an efficient, cost-effective solution (Reinkemeier & Gnewuch, 2022). These technologies allow companies to enhance their customer service capabilities and gain a competitive edge in the marketplace. Research has further explored the role of AI in customer satisfaction, particularly comparing human frontline employees (HFLEs) and AI chatbots in online shopping environments. An experiment with 567 participants revealed that HFLEs deliver satisfaction with experiential product attributes more effectively, whereas AI chatbots excel with functional attributes. Factors such as perceived information quality, perceived waiting time, and positive emotional responses were used to understand the distinct contributions of each service agent.

(Ginting et al., 2023) assessed the impact of AI chatbots in luxury fashion retail and found that chatbot e-services offer interactive and engaging customer-brand interactions. The study provided insights into how chatbots can be used to improve customer care and drive service outcomes. (Haque et al., 2022) explored the influence of chatbots on customer experiences in online shopping and found no significant difference in satisfaction with or without chatbots. However, elements like perceived humanness, personalization, and social support emerged as key factors affecting satisfaction, particularly in terms of problem resolution and chatbot performance. These findings suggest practical implications for retailers using AI chatbots, with recommendations for improving user experience and maximizing the benefits of conversational AI in customer interactions.

Table 2: Main Studies on customer satisfaction

Article	Study Context	Key Findings	Significance
(Ruan & Mezei, 2022)	E -commerce	The study found that human employees lead to higher customer satisfaction for experiential products, while AI chatbots perform better for functional products.	Insights for companies seeking to optimize customer satisfaction in online shopping through the selection of appropriate service agent types.
(Mathew et al., 2021)	Tour &Travel	This study highlights the effectiveness of using AI techniques to analyse customer reviews from various internet resources for decision support in product quality management and research of customer satisfaction.	Use of informatics tools and AI techniques such as Text Mining, Aspect Sentiment Analysis, Data Mining, and Machine Learning
(Aguiar-Costa et al., 2022)	Delivery Service	A meta-analytic study identifies the main constructs that contribute to consumer satisfaction in services provided by artificial intelligence (AI), and an integrated model was developed to illustrate the relationships between consumer satisfaction and intelligent services, highlighting the significance of AI adoption.	Addresses the scarcity of meta-analytic research on service delivery with AI and its relationship to consumer satisfaction.
(Limna, 2023)	Food industry	Adopting big data analytics and AI in coffee and other restaurant improves brand authenticity, brand sentiment, and customer service, increased success.	Improving brand authenticity, brand sentiment, and customer services using new technologies.
(Siraj et al., 2022)	Finance	This paper explores AI advancements and their impact on the finance sector, evaluating the crucial role of chatbots in revolutionizing customer interactions and fulfilling evolving needs in banking.	Impact of chatbots in revolutionizing customer interactions and fulfilling evolving needs in the finance sector.
(Mateescu, 2021)	Banking	The paper examines the impact of AI on banking and financial services, including potential	The need for a thoughtful approach to the implementation

		threats such as the loss of personalization and customization, key elements of customer satisfaction.	of AI in the finance sector to maintain high levels of customer satisfaction.
(Cunningham et al., 2022)	Finance	AI is crucial for banks to remain competitive, with re-imagined customer engagement, intelligent propositions, and integrated supporting capabilities being key elements for success.	Emphasizes the crucial role of AI in the banking sector for enhancing customer experiences and driving innovation to maintain competitiveness.
(Ruan & Mezei, 2022)	Retail industry	This study examines how chatbots in retail sectors influence consumer perceptions and expectations of online human agent interactions, revealing differences in sentiment across sectors and negative impacts on online human agent sentiment after chatbot implementation.	Impact of chatbots on consumer perceptions and expectations of online customer service in the retail industry.
(Ruane et al., 2019)	Fashion Industry	Study evaluates Chatbot effectiveness in luxury fashion retail e-services, revealing interactive and engaging customer service. Insights can guide managers in deciding whether to adopt chatbot virtual assistance, highlighting importance of personalized care in e-services.	The effectiveness of chatbots in providing personalized customer care for luxury fashion brands through e-services.
(Ashfaq et al., 2022)	Digital Service	Study shows that information and service quality positively influence customer satisfaction with chatbots, and perceived usefulness, perceived ease of use, and perceived enjoyment are significant predictors of customer continuance intention. Combined	The importance of information and service quality in driving customer satisfaction and continuance intention towards chatbot-based customer service.

3. Research Methodology

This section outlines the research methodology for the qualitative study on conversational AI and its impact on organizations, employees, and customers. The selected methods and data measurement approaches are discussed below. Two primary research approaches are quantitative and qualitative (Abrams, 2022). While quantitative research employs numerical or statistical data to interpret the research's meaning, qualitative research relies on observations and interviews to gather non-numerical data, focusing on experiences, opinions, and insights. This study incorporates quantitative data from the case company, particularly related to operational efficiency, customer service, satisfaction levels, and associated costs.

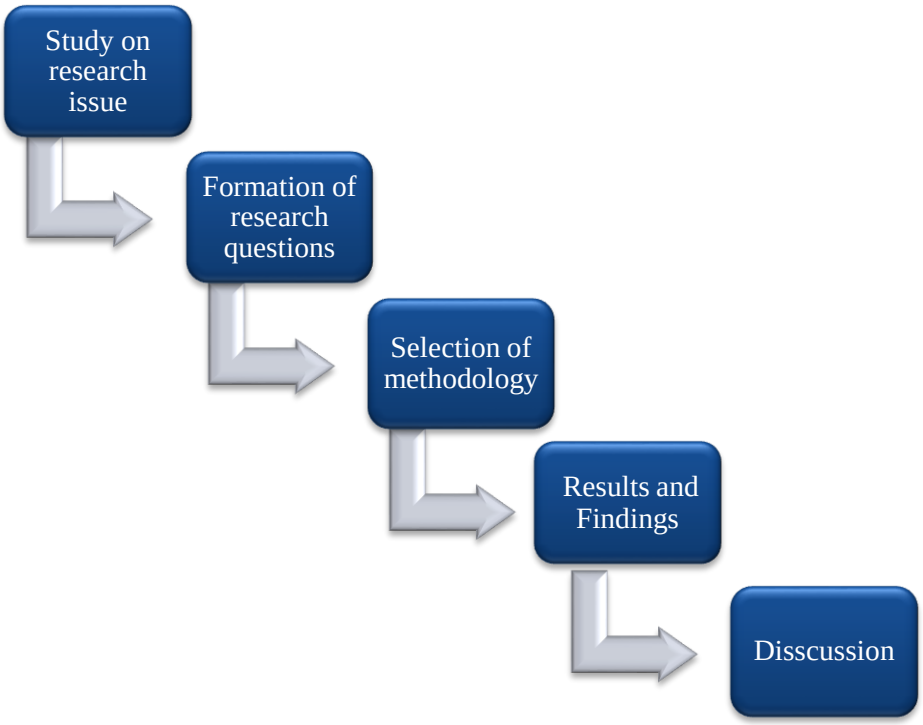

Figure 2: Flow of Research Process

3.1. Data Gathering

Multiple data collection methods are available for this study, raising concerns about optimizing data collection to obtain accurate and comprehensive insights. A well-chosen study framework can enhance data collection efficiency (Fernandez & Aalbers, 2016). (Vorisek et al., 2023) highlights the importance of scientific credibility, which is rooted in methodological rigor, transparent reporting, and independent verification. These elements ensure dependable and trustworthy research findings. Peer-reviewed research that aligns with existing knowledge and is replicable by other researchers further establishes credibility. To maintain objectivity and avoid bias, any conflicts of interest—whether financial, personal, or professional—must be transparently disclosed. Such transparency allows readers to assess potential biases and make informed judgments about the research's validity. Maintaining scientific credibility is essential for producing reliable knowledge that can be trusted for decision-making. It also fosters transparency, accountability, and the development of a trusted body of knowledge. This study follows a structured approach to ensure data collection, analysis, and reporting adhere to rigorous scientific standards.

3.2. Description of Rrespondents

This study included 10 interviewees, all with 3 to 10 years of experience, who were directly responsible for managing operations, teams, and client interactions. The interview questions were designed to be theoretical, relying on the participants' experience to provide insights. The aim was to capture viewpoints that could be relevant for implementing conversational AI tools in their organizations. The interviewees were required to have a foundational understanding of digital transformation processes and their impact on business operations. Moreover, the panel consisted of managers from diverse industries to ensure a wide range of perspectives, applicable across various sectors and types of organizations. Potential participants were selected from the researcher's professional network, with a target of conducting at least 10 interviews to ensure the collection of high-quality and reliable data.

Table 3: Companies and Industries Selected

Industries	Position	Department	Role in AI
Fintech & IT	Business And Technology Analyst	Innovation Team	Research
Fintech & IT	Regional Manager	Operations	Investigation
IT	Product Operations	Technical Product	Design/Developer
Fintech	Software Engineer	Development	Design
IT	Product Manager	Product Management	Research
IT	Infrastructure Engineer	Developer Operations	Implementation
IT	IT Specialist	L1 Support	Investigation
IT	Software Engineer	Development	Research
IT	Developer Advocate	Product Integration	Implementation
Product and IT	Data Scientist	Product Testing	Research

The companies from wider industries as mentioned in Table 3 were selected based on both personal and professional reasons. Personally, access to contacts working within these companies facilitated data collection. Professionally, these organizations are globally recognized leaders in technology and product development, particularly in the field of Artificial Intelligence. Some of the selected companies are heavily focused on IT and are at the forefront of working with conversational AI in their digital environments. Additionally, the respondents have substantial knowledge of AI and conversational AI, which provided valuable insights for the study.

4. Results and Data Analysis

This section presents the findings of the study, including the analysis of responses to identify relationships between variables. Data related to conversational AI knowledge was collected using a 5-point Likert scale, with "No Knowledge" as the highest and "Very Good Knowledge" as the lowest rating. Multiple responses were coded and frequency tables were generated based on a percentage of 100%. The data gathered from the interviews was organized and summarized in an Excel sheet for analysis. Of the 10 planned interviews, all were successfully completed, yielding a 100% response rate. Typically, a response rate of 50% is considered adequate, but achieving 100% in this study was advantageous. The success of the response rate is attributed to the face-to-face interviews, which facilitated focused discussions on the research topics. The results are summarized in Table 1 and Chart 1, showing that 60% of the respondents were from the IT sector, 30% from the Fintech sector, and 10% from product-related sectors. This distribution of respondents across industries provides a broad perspective on the role of conversational AI across different organizational contexts, enabling a more comprehensive understanding of its applications and impact.

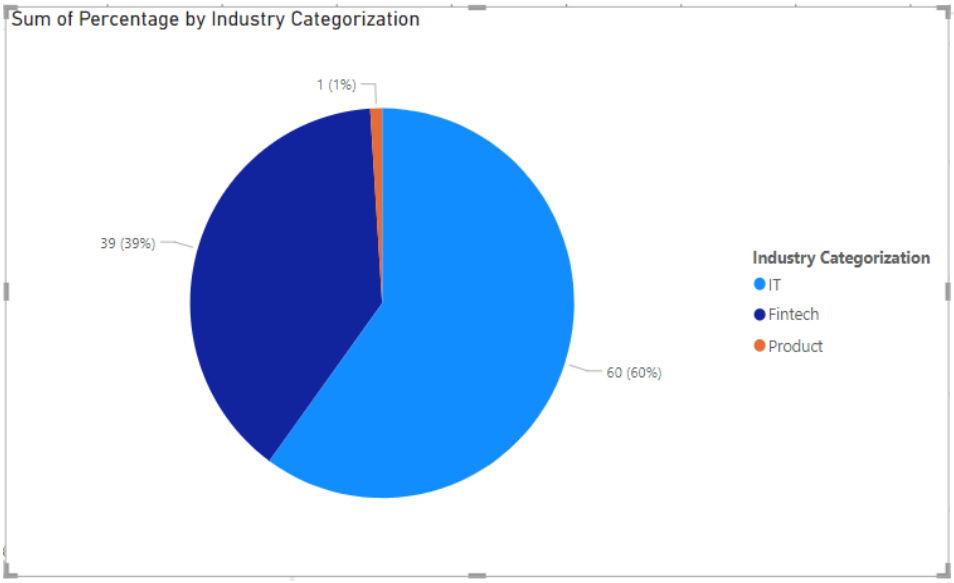

Figure 3: Shows the percentage of industry

4.1. Personal Characteristics

4.1.1. Level of knowledge in conversational AI

The findings in Table 4 reveal that among the 10 respondents interviewed, 30% demonstrated a very good level of knowledge about Digital Transformation, likely gained from direct experience. Half of the respondents (50%) reported having good knowledge, enabling them to utilize Digital Transformation effectively. However, 20% expressed only a basic awareness of the concept, without sufficient expertise to apply it in meaningful ways. Conversational AI facilitates more human-like interactions between clients and technology by leveraging advanced technologies such as artificial intelligence and natural language processing to enhance communication processes.

Table 4: Level of Knowledge

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Some awareness but not enough for serious use	2 Person	20	20	20
Good knowledge and ability to put to serious use	5 Person	50	50	70
Very Good Knowledge with vast experience	3 Person	30	30	100.0
Total	10 Persons	100.0	100.0	100.0

4.1.2. Involvement in AI process

Table 5 illustrates the level of involvement of the respondents in the AI process within their organizations. A significant portion, 60%, reported being highly involved in Data Transformation initiatives, while 40% described themselves as either moderately or less involved. The coded analysis further presents how frequently each theme was referenced during the interviews, highlighting the degree of engagement with AI processes in different organizational roles.

Table 5: Involvement in AI Process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Less Involved**	2 Person	20	20	20
	Involved	2 Person	20	20	40
	Much Involved	6 Person	60	60	100.0
	Total	10 Persons	100.0	100.0	100.0

4.2. Thematic Analysis and Abstraction

The qualitative analysis follows the approach of the same citation (Maruszczyk et al., 2023), focusing on categorizing respondents' perceptions into positive, negative, and neutral responses. These responses were further categorized into distinct variables, with responses classified by the level of understanding reflected in the interview data. Figure 4 provides a breakdown of the participants' responses across several themes, classifying them based on terms such as "Very Clear," "Yes," "No," "High," "Very High," "Partially," "Not Clear," and "Not Sure."

Category	Theme	State Bank of India (SBI)	Wabtec Corporatio	Didomi	Citi Bank	MAQ Software	Revfin	Tata Consultancy Services	SADA	Moreficent	HCL Technologies
Conversation AI understanding and Implem	Definition of Conversational AI	Very Clear	Partially	Not clear	Partially	Partially	Partially	Very Clear	Very Clear	Not clear	Partially
	Awareness relevance	Yes	Partially	Yes	Partially	Yes	Partially	Yes	Yes	Partially	Yes
	Importance of conversational AI Skills	Yes	Partially	No	Partially	No	Partially	Yes	Yes	Partially	Yes
	Level of Interaction with Conversational AI AI proc	High	High	High	Very High	Low	Very High	Very High	Very High	Very High	Very High
	Relevant Advice on Conversational AI	Very High	Low	Very High	Low	Low	High	Very High	Very High	High	Very High
Drivers of Conversational AI	Technonology	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes
	Other external Factors	Partially yes	No	No	Partially yes	Partially yes	No	Yes	Yes	Partially yes	Yes
	Customers	Yes	Partially yes	Yes	Partially yes	Partially yes	Yes	Yes	Yes	Partially yes	No
	Competition	Yes	Yes	Yes	Partially yes	Partially yes	Yes	Yes	Partially yes	Partially yes	Partially yes
Successful Implementation of conversation	Successful conversational AI is important	Yes	Yes	Partially yes	Partially yes	Partially yes	Partially yes	Partially yes	Yes	Yes	Partially yes
	Due time to implement	Very High	Complexity of tech	Yes	Complexity of tech	omplexity of tec	External ev	Yes	Yes	External events	Yes
	Optimizing Conversational AI	Partially Important	Partially Important	Partially Important	Very Important	artially Important	tially Import	Very Important	Very Important	Partially Importan	Very Important
	Successful Outcome	Very Important	Partially Important	Very Important	Very Important	Very Important	tially Import	Very Important	Partially Importan	Very Important	Very Important
	Knowing Conversational AI is working	Very Important	Very Important	Very Important	Very Important	Very Important	ery Importa	Very Important	Very Important	Very Important	Very Important
	Signs Conversational AI needs adjusting	Partially Important	Very Important	Very Important	Partially Important	Very Important	ery Importa	Very Important	Very Important	Very Important	Partially Important
	Simplifying Conversational AI	Very Important	Very Important	Partially Important	Partially Important	artially Importa	ery Importa	Partially Important	Very Important	Partially Importan	Very Important
	Measuring Conversational AI	Very Important	Partially Important	Partially Important	Partially Important	Very Important	tially Import	Very Important	Partially Importan	Very Important	Very Important
	Roadblocks to Conversational AI	Very Important	Partially Important	Not Important	Partially Important	artially Importa	tially Import	Not Important	Partially Importan	Very Important	Not Important
Conversational AI for connecting Organizati	Best departments for Conversational AI	Customer Service	IT Services	Customer Service/I	Internal Management/ Data Enrich	Customer Servi	ment/Custo	Customer Service	Customer Service	Customer Service	ervice Desk/Customer Service
	Best way to finance Conversational AI	Not sure	Not sure	Not sure	Not sure				Not sure	Not sure	Not sure
Conversational AI for connecting Organizati	Conversational AI in customer service	Very Useful	Useful	Very Useful	Useful	Useful	Very Useful	Very Useful	Very Useful	Very Useful	Useful
	Conversational AI in customer satisfaction	Very Useful		Very Useful	Useful	Useful	Very Useful	Very Useful	Very Useful	Very Useful	Useful
	Impacts on operational time	Positive	Positive	Positive	Positive	Negative	Positive	Positive	Positive	Positive	Positive
	Influencing the Operational cost	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Negative	Positive
	Conversational AI in influencing positive work cult	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Negative	Positive	Positive
	Conversational AI impacting Employee efficiency	Positive	Positive	Positive	Not sure	Positive	Positive	Positive	Positive	Positive	Positive

Figure 4: Represent Positive, Negative, Neutral perspective on Conversational AI

This analysis provides insights into how different levels of knowledge and involvement in AI processes influence organizational adoption and integration of conversational AI.

Table 6: Abstraction

Dimensions	Sub Dimensions	Description/Measure
• **Conversation AI understanding and Implementation**	Definition of Conversational AI	Human AI Interaction, Bot talks with human that sounds like human.
	Awareness relevance	They are aware of Conversational AI as all are somehow related to AI in their organization.
	Importance of conversational AI Skills	Understand the importance of skills like Data Training, Developers and Language Expert.
	Level of Interaction with Conversational AI/ AI process	Give human touch to customer, Customer satisfaction and task completion.
	Relevant Advice on Conversational AI	High performance bot, Solve problem immediately and user friendly.
	Technology	Machine Learning, Natural Language Processing, and Voice flow architecture.
• **Drivers of Conversational AI**	Other external Factors	Security, Privacy, Language and Culture.
	Customers	Employee of IT, Banking and Fintech.
	Competition	Existing Voice Bot like Alexa, Google Assistant.
• **Successful Implementation of conversational AI**	Successful conversational AI is important	Less trained bots can lead to loss of organization.
	Due time to implement	If prototype is Successful, then Bot will take less time to build and develop but data training takes time.
	Optimizing Conversational AI for Business	Take Customer regularly and update the tool with latest changes in organization.
	Successful Outcome	Giving best possible solution to customer and replacing Help Desk of organization.
	Knowing Conversational AI is working	Positive feedback from Customer.
	Signs Conversational AI needs adjusting	When answers and solution are not accurate.
	Simplifying Conversational AI	User friendly tool and continuous improvement.
	Measuring Conversational AI	By focusing on customer satisfaction and task completion.
	Roadblocks to Conversational AI	Data Quality, Cleaning, and relationships between data.
• **Conversational**	Best departments for Conversational AI	IT Support, Customer Support, Software

AI for connecting Organizations and customers		Development.
	Best way to finance Conversational AI	Potential Software Developer and Data Engineer.
• **Conversational AI for connecting Organizations and Employees**	Conversational AI in customer service	Replacing Customer Service Executive.
	Conversational AI in customer satisfaction	Help customer more accurately than a customer executive itself.
	Impacts on operational time	Solve problem much faster than customer executive.
	Influencing the Operational cost	Save cost by replacing whole Support team.
	Conversational AI in influencing positive work culture.	Fast and reliable, giving more knowledge to customers with user centric approach.
	Conversational AI impacting Employee efficiency.	Increase the efficiency of employees.

5. Discussion

Artificial intelligence (AI) provides new ways for organizations to communicate with customers and streamline tasks, closely mimicking human interactions. This study explores conversational AI's positive and negative impacts on businesses. Companies must adapt to emerging technologies like conversational AI to maintain their competitive edge with rising competition. However, they must also recognize potential concerns surrounding its usage. (Limna, 2023) highlights that conversational AI fosters human-like interactions between clients and technology, utilizing AI and natural language processing to enable smoother communication. Notable examples like Alexa and Siri have raised ethical questions, particularly after incidents where misuse of AI technology led to unintended consequences, such as the tragic case involving Alexa and a child. While such incidents were not directly the fault of companies, they illustrate the potential risks and negative associations AI can bring to businesses. (Mathew et al., 2021) emphasizes the importance of machine learning and neural networks in the development of AI, which aligns with the responses collected in this study. Though conversational AI is gaining attention from various industries, concerns remain regarding its application in certain sectors. Many respondents from this study recognized the growing importance of conversational AI for customer engagement but also acknowledged ongoing apprehensions about its broader implications. During discussions with representatives from ten organizations, it became clear that while many are leveraging conversational AI, there are significant drawbacks. Organizations that embrace AI technologies often bring them closer to resembling human capabilities, which poses societal concerns about potential over-reliance and the risk of future crises. (Zhai et al., 2021) echoes this sentiment, noting the performance issues and possible threats conversational AI can introduce. A critical societal concern is the use of conversational AI for spreading misinformation or extremist content, especially as younger generations grow up relying on AI interactions rather than human communication. This raises questions about the ethical use of AI and the long-term consequences of these interactions.

The study's respondents came from various organizational roles, with 50% being managers, 20% from technical departments, and 30% from customer support. Top management in these organizations played an essential role in the implementation of conversational AI, though some lacked a deep understanding of its functionality, which may explain their struggles in defining it clearly. The rise of conversational AI can be attributed to both internal and external disruptions, driven by advancements in machine learning, deep learning, and natural language processing. Over time, conversational AI has

evolved from basic chatbots in the late 1990s and early 2000s into more complex systems through the integration of voice recognition, machine learning, and media content.

The study found that 70% of respondents viewed technology as the primary internal driver for adopting conversational AI. Competition was the second most important driver (60%), followed by customer demand (50%). Interestingly, COVID-19 was only a minor factor in driving conversational AI adoption (30%). The importance of smooth processes in implementing conversational AI, consistent with the respondents' views. Similarly, (Limna, 2023) emphasizes the significance of effective implementation, which resonates with the study's findings. (Song et al., 2022) highlights the optimization of conversational AI, aligning with respondent perspectives. Simplifying conversations using AI by focusing on clear and accurate responses benefits customer engagement and is consistent with respondents' views. (Siraj et al., 2022) stresses the importance of measuring AI performance, a view supported by respondents. (Mathew et al., 2021) points out the challenges in implementing conversational AI, reflecting the roadblocks mentioned by respondents. The study by the Institute of Electrical and Electronics Engineers & PPG Institute of Technology (n.d.) highlights the organizational departments best suited for AI integration, which parallels the respondents' insights. (Ng & Tan, 2023) focus on the role of conversational AI in customer service, particularly within the banking and IT sectors, helping customers access information—an aspect also emphasized by respondents. (Vorisek et al., 2023) addresses customer satisfaction linked to AI implementation, aligning with respondent feedback. (Paz & Blanco, 2024) discuss how AI saves time and costs, again consistent with this study's findings. Simplifying conversational AI is often achieved by analyzing human intelligence and applying that understanding to make AI interactions more natural.

Several key themes emerged from the study related to the application of conversational AI within organizations:

1. **Employee Engagement:** A major challenge organizations face is employee disengagement due to excessive micromanagement. Simplifying conversational AI could address this by allowing employees to be productive without spending excessive time on repetitive tasks.

2. **Knowledge Management**: With the vast amount of data organizations produce daily, it becomes difficult for human workers to process all the information. Simplified conversational AI can help IT managers and others responsible for knowledge management share essential information more efficiently, without losing accuracy.

3. **Reactive Maintenance:** Workers with limited knowledge of a system may struggle to ensure tasks are completed in the correct order. Conversational AI can streamline the maintenance process, minimizing errors and improving efficiency.

4. **Field Service:** Some systems, such as those used in vehicles, are highly functional but lack intelligent decision-making capabilities. Conversational AI can be developed to assist operators in making better-informed choices.

5. **Business Intelligence:** Conversational AI can improve the way organizations interact with data, making it easier to access and analyze information without needing significant changes to existing systems.

Around half of the respondents viewed conversational AI as a tool to monitor and streamline business processes. Conducting an internal resource analysis emerged as an effective approach to simplifying conversational AI processes.

6. Conclusion

In recent years, machine learning has made notable advancements across various industries, such as healthcare and marketing. A significant development within this field is "conversational AI," which enables computers to engage in natural dialogues with humans. This technology is now employed in chatbots, voice assistants (e.g., Siri, Cortana, Alexa), virtual assistants, voice-driven interactive experiences (such as virtual reality and video games), and language translation services (e.g., Google Translate, Microsoft Translate). The increasing prevalence of computer-mediated communication drives the growing interest in conversational AI. As digital communication becomes more widespread, the integration of conversational AI into these interactions becomes increasingly relevant. Research indicates that conversational AI is expected to become mainstream in the near future. Conversational interaction has long been a fundamental aspect of human communication, supported by various techniques. Conversational AI is seen as a natural extension of these techniques, offering diverse benefits. However, one major challenge is that human communication involves complexities such as pragmatics, semantics, and subtle non-verbal cues. Natural Language Processing (NLP) is critical for addressing these complexities, as it enables the effective analysis and interpretation of human language.

This study aimed to evaluate the potential impact of conversational AI on customer service, satisfaction, and organizational interactions. The analysis revealed that current processes within organizations are time-consuming and increasingly data-driven but still lack a human touch. Conversational AI, with its data-driven approach and ability to facilitate natural interactions, offers a promising solution. By leveraging voice interactions, conversational AI can enhance customer experiences, improve employee efficiency, and contribute to overall business growth. However, the study's limitations include a small sample size of only ten firms, which may affect the robustness of the findings. Future research should aim to include a larger and more diverse sample to provide more comprehensive insights.

6.1. Recommendation

The study underscores the transformative potential of conversational AI for enhancing organizational interactions with customers and employees. While conversational AI presents significant opportunities, it also involves considerable costs and complexities. Therefore, brands should collaborate to develop seamless and well-regulated implementations of this technology. Conversational AI can significantly improve the communication of products and services across various industries, including IT, enterprise, retail, and healthcare. However, given its novelty, it requires extensive testing and training. Understanding its limitations and addressing the lack of robust examples is essential. Although conversational AI can facilitate customer service and reduce costs, it is still in the early stages of development. Most current AI systems resemble chatbots and are limited in their ability to engage in natural conversations. Future advancements should focus on creating systems that can genuinely understand and interact meaningfully with users, rather than just providing scripted responses. To address current shortcomings, conversational AI should prioritize "understanding" over mere "answering" of questions. Future research could explore the following:

1. Industry Diversity: Investigating the needs for conversational AI across various industries and among different personas could provide deeper insights into its applications and effectiveness.

2. Model Variability: Revising the model construction to incorporate multiple variables, rather than relying on a single prototype, could offer a more refined understanding of its adaptability and effectiveness.

Expanding research beyond the banking sector and testing these ideas could further refine the development and deployment of conversational AI technologies

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