Introduction

The world is on the cusp of significant technological and digital evolution. Artificial intelligence has seamlessly integrated into human lives, making it more convenient and blurring the lines between reality and technology. Chat GPT, one of OpenAI's latest creations, is a conversational artificial intelligence (Tufekci, 2022) program designed to mimic human interactions. Conversational agents are trained with large datasets of human-generated text, enabling them to respond coherently and human-likely. AI is slowly becoming a major component in big corporations and is bringing significant changes in the banking and finance sectors. As AI grows in different sectors, it brings many ethical questions focusing on the effects of using conversational agents such as chat GPT, job security and work practices.

What are Conversational agents?

Conversational agents are computer programmes created to mimic conversations with human users. They are frequently employed in customer service, where they can address frequent questions and offer prompt assistance, but they are also utilized in marketing, entertainment, and education. Conversational agents use natural language processing (NLP) and machine learning technologies, enabling the chatbot to comprehend human speech and provide human-like replies. Users can access them via a chat interface and connect them to websites, mobile apps, and messaging services. Despite their growing popularity and technological breakthroughs, conversational agents still face hurdles like effectively interpreting user intent, processing more sophisticated inquiries, and seamlessly blending in with human-led dialogues.

Conversational agents and user data

Conversational agents work on large amounts of data they have been trained on and learn as the program is used. CAs in finance will often be implemented in many different ways. CAs can be used as investment managers administering clients' investment portfolios or as a chatbot for customer service and human interaction. These agents can eliminate the need for humans in a bank with unskilled jobs. This brings an ethical question "How safe is user data?" Firstly this is a significant consideration given the intimacy CAs allow in their interactions with their clients, which is a privilege and responsibility previously being looked after by bankers(McGreevey). There are ethical implications related to data breaches, especially in financial advice involving sensitive personal and financial information. Information such as current financial status, income, expenses and assets can be the most vulnerable data. Such data can be used for identity theft, fraud and financial exploitation. There are ways in which companies can protect user data through encryption and secure storage. In addition to security, banks and companies should also have a plan ready to mitigate damages in case of a data breach (WhosOn, 2022).

Kantianism's approach to Conversational agents

Kantianism is a version of deontology introduced by the German philosopher Immanuel Kant. The core idea of Kantianism is that humans should not be seen as mere objects. Kant argued that the motives make an act wrong or right, not its consequences. In business contexts, Kantianism implies an obligation for businesses (and businesspeople) to treat all humans with respect. In particular, respectful treatment is considered obligatory regardless of one's goals and mission (MacDonald, 2018). In the case of CAs being used for financial advising, from a Kantianism, using

customer data by banks and finance firms for financial planning may infringe on customers' right to privacy. Furthermore, Kantianism would suggest that the decision-making process of the conversational agent should be built to respect the customer's autonomy and not undermine their capacity to make their own financial decisions. For example, the agent's recommendations should be based on the customer's goals and risk tolerance rather than optimizing the institution's return on investment.
Therefore if we look at Kantianism, the use of conversational agents for financial investment advice should work based on making the best decisions for the user than for the firm. The financial institution should ensure that customer data and the design of the conversational agent align with these values.

Utilitarianism approach to Conversational agents

There are two types of utilitarianism, act utilitarianism and rule utilitarianism. Utilitarianism, in general, chooses the cause with a greater good. Good acts increase happiness, and immoral acts decrease happiness consequentialism is the complete contrast of deontology. According to utilitarianism, such agents' advantages for clients' financial well-being should be weighed. Let us look at CAs in financial investment advice from a utilitarian point of view. This approach prioritizes the greatest good for the most significant number of people, as increasing the financial well-being of the bank's customers would benefit society as a whole.
Within the Utilitarian tradition, there are two distinct approaches: Act Utilitarianism and Rule Utilitarianism. Act utilitarians think that when determining what to do, we should choose the option with the highest net utility. Rule utilitarians have a two-part viewpoint that emphasizes the importance of moral rules(Fieser). A Rule Utilitarian approach would focus on the actual repercussions of adopting a rule such as "respect

the privacy and autonomy of the consumer" in deploying conversational bots for financial investment advice. An Act Utilitarian approach would weigh the morality of utilizing conversational agents on a case-by-case basis, considering the customer's and society's overall consequences.

Hence contrary to Kantianism, a utilitarian approach would say that the use of CAs should prioritize the use of maximum benefit for the customer as it will be the best outcome and will have the highest utility. A utilitarian CA suggests that clients see the maximum potential in their investments and forget about their goals which may not be the best outcome.

Social contract theory approach to Conversational agents

According to social contract theory, law and political order are not natural. It is believed that if a social contract is followed, then one can live by his own choices. An example of an explicit social contract is the U.S. constitution. According to Social Contract Theory, the financial institution has an obligation to operate in the best interests of its consumers. The employment of conversational agents might be viewed as a contract between the consumer and the bank. The customer entrusts the bank with their financial information and investments in exchange for professional advice and management. As social contracts are often broken, in any case where a social contract is broken, clients' data is in jeopardy; the finance firm would be the one to protect its client's data. A firm breaking the social contract will lead to many ethical issues, including data privacy infringements. Hence according to a social contract, the company and the CA should be used only for its client's benefit.

Personal Views on using Conversational agents

Conversational agents should be implemented in different financial areas as there are many advantages of such a system. CAs are low-cost and are better than humans at perceptual tasks, analytical tasks, decision-making, and planning. These features will ensure that clients make the most out of their investments and reach their financial goals in the most efficient way possible. Most CAs in financial investment advice are trained on large sets of financial theories. To drive their goods, they conduct cutting-edge investment portfolio research influenced by existing ideas (Friedberg, 2022).

On the other hand, there are worries regarding the accuracy, dependability, and openness of conversational agents' guidance. There is also the problem of client privacy and the ethical usage of financial information. CAs still need to be developed to be personalized, given that a set of goals by the client do not necessarily mean that the plan would go as planned. An investment agent would not be able to help with sudden changes in goals due to situational circumstances. Another issue with CAs is that people needing more knowledge and familiarity with the technology might create problems. For example, senior citizens might be used to in-person interactions and uncomfortable using an AI system. This renders the AI system useless, as a human would have to assist people.

Finally, I feel that the employment of conversational agents for investment advice should be carefully weighed in light of the possible advantages and disadvantages. It is critical to developing clear standards and regulations to safeguard customers' rights and interests.

Conclusion

In conclusion, the use of conversational agents in the financial sector may raise many ethical questions concerning job security, user data protection, and the balance between maximizing the financial well-being of clients and respecting their privacy and autonomy. However, using both the Kantianism and Utilitarianism approaches, it would be relatively easy to create a conversational AI that prioritizes the clients' financial well-being and privacy. When talking about jobs in the era of conversational agents, AI needs to be developed more to handle ambiguous tasks and requires creative inputs or the use of logic and common sense (Manyika). On the sixth of May 2010, a flash crash started as the Dow Jones Industrial Average fell more than 1,000 points, leading the company to a loss of equity worth one trillion dollars. The cause of the flash crash was an algorithm typing erroneous order. As trading has become heavily computerized, human intervention in such tasks is essential to identify errors and glitches and prevent flash crashes (Kenton, 2022).

Word Count: 1509

References:

1) Tufekci, Z. (2022, December 15). *What would plato say about chatgpt?* The New York Times. Retrieved February 3, 2023, from https://www.nytimes.com/2022/12/15/opinion/chatgpt-education-ai-technology.html

2) McGreevey, J. D., Hanson, C. W., & Koppel, R. (2020). Clinical, Legal, and Ethical Aspects of Artificial Intelligence–Assisted Conversational Agents in Health Care. *JAMA : the Journal of the American Medical Association*, *324*(6), 552–553. https://doi.org/10.1001/jama.2020.2724

3) *Why your live chat channel is a back door for Cybercriminals*. WhosOn. (2022, September 22). Retrieved February 3, 2023, from https://www.whoson.com/live-chat-best-practice/why-your-live-chat-channel-is-a-back-door-for-cybercriminals/

4) MacDonald, C. (2018, April 25). *Ethical theory: Kantianism*. The Concise Encyclopedia of Business Ethics. Retrieved February 3, 2023, from https://conciseencyclopedia.org/entries/ethical-theory-kantianism/#:~:text=In%20business%20contexts%2C%20Kantianism%20implies,ones%20goals%20and%20mission%20are.

5) Fieser, J. (n.d.). *Act and Rule Utilitarianism*. Internet encyclopedia of philosophy. Retrieved February 3, 2023, from https://iep.utm.edu/util-a-r/

6) Friedberg, B. A. (2022, December 30). *Pros and cons of using a robo-advisor*. Investopedia. Retrieved February 3, 2023, from https://www.investopedia.com/articles/personal-finance/010616/pros-cons-using-roboadvisor.asp

7) Manyika , J. (n.d.). *Ai, automation, and the future of work: Ten things to solve for*. AI, automation, and the future of work: Ten things to solve for. Retrieved February 3, 2023, from https://www.mckinsey.com/featured-insights/future-of-work/ai-automation%20and-the-future-of-work-ten-things-to-solve-for#

8) Kenton, W. (2022, July 8). *What is a flash crash?* Flash Crash. Retrieved February 3, 2023, from https://www.investopedia.com/terms/f/flash-crash.asp

9) Ugale, A. (2020, January 5). *Impact of conversational agents on customer service employees*. Impact of Conversational Agents on Customer Service Employees. Retrieved February 3, 2023, from http://orapp.aut.ac.nz/handle/10292/13076

10) YouTube. (2018, December 15). *Chatbots: Helping your finances or upselling?* YouTube. Retrieved February 3, 2023, from https://www.youtube.com/watch?v=C339h8YBxuY

11)Thompson, V. (2022, October 7). *3 ethical considerations when implementing AI for your bank - glia blog: Digital Customer Service explained*. Glia Blog | Digital Customer Service Explained. Retrieved February 3, 2023, from https://blog.glia.com/3-ethical-considerations-when-implementing-ai-for-your-bank/

12) Thomaz, F., Salge, C., Karahanna, E. *et al.* Learning from the Dark Web: leveraging conversational agents in the era of hyper-privacy to enhance marketing. *J. of the Acad. Mark. Sci.* **48**, 43–63 (2020). https://doi.org/10.1007/s11747-019-00704-3