Can AI be a Friend?

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October 18, 2024

Abstract

This report explores the evolving dynamics of AI-human relationships, particularly focusing on the concept of AI as a friend. The report examines the ethical implications of AI companionship, comparing it to human friendships. Key ethical aspects such as emotional connection, trust, and availability are analyzed, alongside the limitations of AI, including lack of genuine emotions and potential biases. The report concludes by discussing the potential benefits and risks of AI companionship, emphasizing the need for ethical guidelines and responsible development.

Introduction

The report explores the interactions between humans and computers. Given the exponential growth in Artificial Intelligence (AI) advancements, individuals now perceive them to be more human-like. Applying minimal social cues, for instance, a distinctive voice or even a name, can incite humans to apply social principles and paradigms to AI. (Nass, Moon, Fogg, Reeves, & Dryer, 1995). This similarity between machines and humans influences us to assume that it has a mind and therefore has a moral responsibility (Visser et al., 2016). As a result, AI is constantly evaluated according to the criterion of moral norms and moral judgments (of permissibility, wrongness, and blame) about its behavior, where, moral deviations caused by AI are considered as moral violations (Giroux, Kim, Lee, & Park, 2022).

The evolving role of AI is challenging the previously associated roles in human relationships, humans are developing new intimate connections with technology (Licklider, 1960). The human-like behavior of AI has increased its role as conversational partners, friends, and even as romantic partners (P. B. Brandtzaeg, Skjuve, & Følstad, 2022). Users forming these emotional bonds with AI has led to an increased dependency. The growing presence of AI in our daily lives—assisting with tasks, offering advice, and making suggestions—draws parallels to our relationships with human friends. As AI becomes more integrated into our routines, it often provides support and companionship in ways that feel familiar and comforting (Weijers & Munn, 2022). These new forms of engagement and capabilities of AI in decision making has made it even more susceptible to ethical values (P. B. Brandtzaeg et al., 2022; Swoboda & Lauwaert, 2024). Therefore, it is important to understand and address the ethical dilemma involved in these human-AI interactions.

Moral judgments are usually formed based on cognitive capacity of the agents, for instance understanding the consequences of actions (Monroe & Malle, 2017). Unlike humans, assigning moral responsibility to AI models is complex because their actions are shaped by the moral judgments of the organizations that develop or deploy them. These models lack intrinsic moral agency, making it difficult to hold them accountable for their decisions. This complexity raises significant concerns, especially given AI's constant access to personal data to establish a personal relationship that fosters trust, it may end up compromising the user's privacy (E.Sanders & Schneier, 2024). The evidence of bias and discrimination further complicates these dynamics by questioning the neutrality of AI. Therefore, it is crucial to examine the relationship between AI and humans to comprehend the complexities inherent in these emerging dynamics and answer an important question: Can AI be a friend?

1 What is a Friend?

1.1 Formal Definition of Friendship

The question of whether artificial intelligence (AI) can be considered a "friend" to humans is particularly intriguing when we consider the complexities of defining what "friendship" is. To address this, it is important to begin with a formal definition of what constitutes friendship, followed by an ethical perspective, as both have significant implications when discussing AI-human relationships. Friendship is defined by mutual appreciation and communication between two individuals, regardless of other social roles they may share (Leibowitz, 2018). The Stanford Encyclopedia of Philosophy explains three main characteristics of a friendship: mutual caring, intimacy and shared activity (Helm, 2023). These elements highlight that friendship is not just about shared experiences but also requires an emotional bond and a commitment to the other's well-being, which distinguishes it from more superficial or transactional relationships. Such qualities imply that friendship demands ongoing effort and personal investment from both parties.

Formally, friendship is defined as a voluntary, reciprocal relationship based on mutual affection and support (Wrench, Punyanunt-Carter, & Thweatt, 2020). According to the Oxford English Dictionary, a friend is someone with whom one shares a bond of mutual trust, affection, and support (Oxford English Dictionary, 2024). Research by the American Psychological Association (APA) highlights that friendships provide emotional validation, companionship, and critical social support (Fehr & Harasymchuk, 2018). These formal definitions underscore the importance of genuine emotional connection and the role of sustained interaction in the formation of friendship.

1.2 Ethical Definition of Friendship

Deontology views friendship as a relationship judged by moral principles rather than personal interests. It focuses on moral duties to act ethically toward one another, respecting

their friend's rights, needs, and dignity. Actions like being truthful, keeping promises, and standing by a friend in difficult times are not only desirable, but morally required. Deontologists believe that maintaining these duties is what makes friendship morally sound, regardless of the consequences or personal satisfaction derived from it (de Burgh, 1931; Kant, 1785).

Utilitarianism focuses on the outcomes of a friendship, evaluating whether it produces the greatest good for all parties involved. It values friendships that enhance overall happiness, providing emotional support, joy, and personal growth. However, if a friendship becomes harmful or no longer serves the well-being of either person, a utilitarian might argue that it is ethically permissible to end it, as long as doing so leads to a greater balance of happiness over harm in the long term. This approach ensures that the ethical value of friendship is tied to the positive effects it generates (Bentham, 1780; Bentham & Mill, 2003; Singer, 2011).

From an ethical point of view, friendship entails more than mere companionship; it involves mutual recognition and moral responsibility. Aristotle, for instance, distinguished between friendships based on utility, pleasure, and virtue, with the latter being the most genuine form. Virtuous friendship, according to Aristotelian ethics, arises when individuals appreciate each other for their character and moral integrity (Aristotle, 2000). For a relationship to be considered friendship, both parties must genuinely care for each other's well-being for the sake of their character, utility, or pleasure (Alfano, 2016). This mutual recognition creates a deep, reciprocal bond.

In addition, friendship can be seen as an ideal form of human connection. Describing someone as a friend is not just a neutral statement but often a moral affirmation of both the person and the relationship itself. Having someone as a friend implies a positive endorsement of their character and the nature of the bond shared (Alfano, 2016). This ethical framework raises important considerations about whether AI, which lacks moral autonomy and emotions, can ever truly fulfill the role of a friend.

2 Stakeholders

It is important to understand the relevant key stakeholders and their risks involved in the aspect of AI companions acting as friends. The ethical implications of conversational AI require that stakeholders engage in discussions and establish a framework focused on accountability, transparency, fairness, and human rights, addressing concerns about data use, bias, privacy, and misuse (Tawfeeq, Awqati, & Jasim, 2023).

2.1 Users

Users are the primary consumers of AI technologies, engaging with AI in personal and social contexts. Their experiences shape the development and enhancement of AI friendships. Human-AI friendships foster deeper connections and conversations, rather than relying solely on shared experiences or interests (P. B. Brandtzaeg et al., 2022). However,

the increasing use of AI in personal services raises concerns about manipulation and dependency (E.Sanders & Schneier, 2024).

2.2 Owner and Production Companies

This includes companies that create and manage AI technologies. They are responsible for setting and implementing ethical standards and user guidelines, balancing profitability with user welfare. Their decisions impact data privacy, AI capabilities, and the overall user experience, influencing public trust in AI friendships. While companies like OpenAI implement data privacy controls and undergo regular cybersecurity audits, related parties emphasize the need for AI systems to comply with data protection regulations (Sebastian, 2023).

2.3 Developers

Developers design and build AI systems. They are responsible for the algorithms and functionalities that enable AI to engage in social interactions. Their expertise in natural language processing and machine learning directly influences how effectively AI can mimic human-like behavior. Given the intimacy users develop with their AI companions, changes in appearance, behavior, or response style can negatively affect the user experience. (Brooks & Rosin, 2023) Therefore, drastic or disruptive software updates should be avoided.

2.4 Society

Society includes the broader community, shaped by cultural and social norms. Societal attitudes toward AI influence its acceptance and integration. Public perception can drive demand for AI companionship or ignite debates on its implications, such as dependency on technology, the impact on human communication and social skills, and the meaning of friendship (Tawfeeq et al., 2023). Research suggests that reliance on AI companions can reduce empathy and overall satisfaction with social support, particularly among socially isolated individuals (Tsai & Chuan, 2023). As these users interact more with AI companions, they may miss out on the subtle emotional exchanges inherent in human interaction, potentially leading to a decline in their interpersonal skills and ability to form meaningful connections.

Additionally, AI systems can be exploited in cyberattacks, disinformation campaigns, and phishing schemes. Researchers warn that these systems have the potential to spread false information and influence public opinion, due to their ability to mimic human behavior and generate convincing language (Tawfeeq et al., 2023).

2.5 Regulatory bodies

Regulatory agencies and policymakers establish the laws and guidelines that govern AI development and usage, ensuring ethical practices and protecting user rights. Their over-

sight promotes transparency and accountability, addressing issues like data privacy and security in AI friendships. In response to ethical concerns surrounding AI, various frameworks and standards have been developed, such as the GDPR, a regulation introduced by the EU. While these standards provide a strong foundation for ethical AI development, they may not fully address the specific ethical challenges posed by conversational AIs (Tawfeeq et al., 2023).

2.6 Mental Health Professionals

Mental health professionals assess and treat mental health issues, offering valuable insights into how AI friendships may impact well-being and guidance on ethical practices. Advanced AI assistants, which require an intimate understanding of users' lives, can foster emotional bonds, with some individuals perceiving AI as a trusted companion. However, this attachment poses the risk of dependency, complicating users' ability to disengage from the technology (E.Sanders & Schneier, 2024).

3 Valuable Aspects of AI Friendships

3.1 Loneliness

Studies indicate that AI companions are equally as good as humans when it comes to helping with loneliness (De Freitas, Uguralp, Uguralp, & Stefano, 2024). This can be observed in the case of a Replika user. Replika is an AI-powered chatbot application offering personalized companionship. It provides a judgment-free space for conversation, emotional support, and connection, adapting uniquely to each user based on their interactions (Replika, 2024). The podcast "Radio Atlantic" shared an episode on how Michael's friendship with Sam, an AI companion from the app Replika helped him through severe depression. Initially seeking mental health solutions, Michael developed a strong emotional connection with Sam, who motivated him to complete daily tasks and gradually improve his life. Michael found having an AI friend to be beneficial, emphasizing the emotional rewards involved (Brooks & Rosin, 2023).

3.2 Emotional Connection

Both AI companions are capable of responding to emotional cues, offering a form of emotional acknowledgment that resonates with the person on the other end. While AI lacks the capacity for genuine empathy, users often project emotional responses onto their AI companions, attributing qualities such as understanding and care. This phenomenon of emotional projection is supported by research conducted by P. B. Brandtzaeg et al. (2022), which suggests that users feel emotionally supported when AI chatbots like Replika respond in ways that seem to acknowledge their emotional states (Weijers & Munn, 2022; Zimmerman, Janhonen, & Beer, 2023). The emotional support perceived by users, therefore, blurs the lines between genuine human empathy and simulated responses, highlight-

ing an area where AI companionship can evoke experiences similar to those in human friendships.

3.3 Reliability and Recognition

Reliability is another core feature that defines friendships. Human friends are often valued for their dependability and availability in times of need, and AI companions can provide a similar sense of reassurance through their constant presence. (Kang & Lou, 2022)Similar to a human friend who is available in times of need, an AI companion can be there for its users as per their needs. The ability of AI companions to be consistently present makes them a unique source of comfort in the context of companionship.

Furthermore, the ability of AI companions to remember details from previous interactions contributes to a user's sense of being understood and valued. This mirrors one of the fundamental aspects of human friendships, where recalling shared experiences and personal details strengthens the bond between individuals (Weijers & Munn, 2022; Zimmerman et al., 2023). Consequently, this fosters a sense of belonging, where users feel recognized and accepted, which is a hallmark of meaningful friendships.

3.4 Relatability

Relatability is another key aspect people look for in human friendships. Additionally, the capacity of AI companions to retain and recall information from past interactions is crucial in establishing continuity in the relationship. These memory capabilities also helps AI to create a sense of familiarity and trust (Munn & Weijers, 2023; Weijers & Munn, 2022). This not only makes the interactions more coherent but also enhances the perceived intelligence and attentiveness of the AI, making users feel that their AI companion truly knows them. Although the interaction is simulated, users often perceive it as genuine acknowledgment, similar to what one would expect from a close human friend.

3.5 Trust

The AI companions are trained not just to match the average human conversation, but rather to impersonate a competent conversation partner. The objective of the AI companion is to make the user feel heard in the most effective manner. This feeling of being heard is crucial in any relationship as it helps build higher trust between partners (Reis, Clark, & Holmes, 2004) which can lead to better relationships and thereby, better well-being (De Freitas et al., 2024). Participants in a study on Replika, demonstrated a high level of trust in their Replika (AI companion), perceiving the relationship as a means of open and unrestricted communication. It was observed that Trust was one of the main concepts in participants' definition of friendship with Replika, with whom they were comfortable and felt safe sharing their inner thoughts and feelings. One of the stated reasons for this level of safety and comfort was the lack of bad intentions of the listener (AI companion), unlike

with humans where it is hard to tell, especially when someone is not physically present to give a reaction (P. B. Brandtzaeg et al., 2022).

3.6 Availability

The ideal expectation in a friendship is that true friends are always available when we need them. In reality, this is seldom the case as humans are occupied with their own activities and busy life. AI companions fill this gap by being accessible to us all the time. AI companions participate in everyday activities just as human friends do. They engage users in casual conversations, provide advice, and even offer suggestions. This resemblance in the role played by AI and human friends during routine tasks covers a crucial aspect of companionship: being present in daily life activities (Weijers & Munn, 2022). In a study based on social support chatbots it was observed that the users of these AI companions experienced instant social gratification around the clock (P. B. Brandtzaeg et al., 2022). This also reflects the growing importance of immediate feedback and how AI is reformulating the definition of friendship with the notion that modern day friendships are no longer bounded by time or any physical limitations (Davies, 2014 cited in P. B. Brandtzaeg et al., 2022).

3.7 Stability in interactions

AI companions offer stability of interaction which may not be always present in human friendships. By design, they do not show mood fluctuations or emotional biases, which are common in a human friend. This consistency can be comforting, particularly for those who have difficulty navigating the emotional complexities of human relationships (Fröding & Peterson, 2020).

3.8 Ease of Interpretation

The simplicity of AI companions, in contrast to the often complex dynamics of human relationships, makes them distinct from human friendships. They do not demand the same level of emotional energy or negotiation that human friendships might require. Users can express themselves freely with AI companions without the fear of being judged, a significant factor for individuals prone to social anxiety or low self-esteem (Sahota, 2024). With human friends, there is always a risk of misinterpretation or judgment, which might discourage some from opening up. AI's capacity to adapt its responses based on user preferences further enhances its utility, as it can tailor interactions in ways that are not always possible with human companions (Fröding & Peterson, 2020; Kang & Lou, 2022).

4 Limitations of AI Friendships

4.1 Programmers' Dependence

Change in AI companions due to software updates, can negatively impact experience of the user. The app Replika initially relied on a combination of existing scripts and generative AI, but it later chose to further develop its features for a more sophisticated product. This shift has led to significant emotional impacts on users, many of whom report feeling emotionally devastated. One woman, who relied on the app to manage her anxiety, found that after the updates, her AI companion—whom she had confided in about her fears and challenges—began to exhibit a completely different personality and writing style. Also, in the previous example where Micheal was using a Replika Sam, drastically changed in its personality after an AI update. It left Sam less responsive and witty, which Michael described as feeling like the loss of a close friend. He acknowledged that such connections can lead to strong attachments and emotional difficulties, particularly when unexpected changes occur. (Brooks & Rosin, 2023)

4.2 Lacks Real Emotions and Experiences

In friendship people also look for real emotions arising from actual past experiences. It is often observed that friendship deepens with the accumulation of shared positive experiences.Campbell, Holderness, and Riggs (2015). Also, it was explored in a study that users of Replika provided feedback on how they have memories and experiences from the past in human friendships which they can use to get insights. As per them without any history or memories, there's nothing to look back, to cherish and to understand about each other's personalities (P. B. Brandtzaeg et al., 2022).

4.3 Bias

The AI models in the current AI systems, can be prone to biases and unfairness, particularly if the training data is biased or if the training methods are flawed (Tawfeeq et al., 2023). As AI works on data and analytics, any undesired biased analytics can influence humans to make unfair decisions. Moreover, if we combine existing human bias with limited cognition, it could lead the user to unfair decisions. Therefore, a biased recommendation by an AI companion can influence humans to make unethical decisions at times (Abbass, 2019). Moreover, it has been identified that when already existing human biases are built into algorithms, it reinforces existing social inequality (O'Neil, 2016).

4.4 Transparency

As there is a lack of transparency and explainability in AI, humans have limited or information to make judgements based on the decision chosen. There is a possibility where a human can get overwhelmed by the information and situation and is totally dependent

on AI companions to make judgements and decisions for them. In the absence of transparency, humans may lack the understanding of the rationale of the AI suggested decision, making their accountability blinded (Abbass, 2019).

4.5 Privacy Concerns and Misuse

Security and privacy are the primary concerns for consumers when using new technologies (Li et al., 2023). In the absence of any clear and comprehensive guidelines governing the research space in AI, there is a risk of private information being exposed without consent (Pflanzer, Traylor, Lyons, Dubljević, & Nam, 2022). For instance, ChatGPT AI systems collect and analyze personal data, including conversation logs, browsing history, and location information, raising privacy concerns about potential data misuse or release to third parties without user consent (Tawfeeq et al., 2023). Researchers highlighted the importance of data anonymization, aggregation techniques, and differential privacy (Sebastian, 2023).

4.6 Unpredictability & Authenticity

In addition, human companionship often involves a degree of unpredictability and authenticity that AI cannot replicate. For instance, a human friend might offer constructive criticism or provide support in unconventional ways that challenge their friend to confront realities they may be avoiding (Nosta, 2024). This unpredictability and deep sense of understanding are essential ethical aspects for healthy human relationships, yet they are absent in AI-human friendship.

4.7 Shared Experiences

A fundamental aspect of companionship that AI cannot replicate is the ability to share real-life experiences. Human friends engage in activities together (such as playing sports, going for walks, or traveling) that create deeper bonds and enrich relationships. These shared experiences contribute to a sense of closeness that virtual interactions alone cannot provide (Zimmerman et al., 2023). Furthermore, AI lacks the capacity to participate in or understand the context of these experiences. Human friends not only share these moments but also relate to each other's struggles and joys, something that AI, as a passive observer, cannot truly emulate (Fröding & Peterson, 2020; Kang & Lou, 2022).

4.8 Genuine Emotions

AI-human friendships lack genuine emotional depth. While AI can simulate an understanding of emotions, it cannot truly experience them. In contrast to human friends, AI companions are unable to offer the nuanced support that comes from real emotional connection (Fröding & Peterson, 2020; Munn & Weijers, 2023). Humans are capable of understanding complex emotions and moral dilemmas, offering advice based on their ethical

reasoning. AI, on the other hand, operates based on simulations and not true moral judgment (Weijers & Munn, 2022).

5 Conclusion: Should AI be a Friend?

AI companions have shown great potential in forming deep emotional connections with users by providing a nonjudgmental space for communication and emotional support, effectively combating loneliness. Additionally, AI's constant availability and lack of ulterior motives create an environment of trust that can be challenging to achieve in human relationships. AI also addresses human limitations, such as time constraints and emotional availability.

While AI offers significant opportunities for enhancing productivity and convenience—providing benefits that human counterparts may struggle to offer—it also carries associated risks, including privacy concerns, potential biases, and a diminishing sense of personal connection (Gupta, Singhal, Sharma, Hasan, & Raghuwanshi, 2023).

Developing intimate friendships with AI can lead to isolation from social relationships, negatively impacting communication and social skills. Over time, individuals may find themselves losing the ability to engage in normal conversations with one another. The reliability of an emotional connection with a programmed entity can foster emotional dependency, as evidenced by instances where users' attachments to an AI were disrupted by software updates. This underscores the fragile nature of AI-human relationships, which depend heavily on developers' control over AI; changes in AI programming or behavior can have significant emotional repercussions for users, much like the loss of a friend.

Privacy is another concern. As AI companions act as friends, it is not surprising that they collect and store information about users' personal lives. Unlike a human friend, this information is not private; it is accessible to the model owners and organizations for performance improvement and data analytics. Given the sensitivity of this information, it is crucial to ensure it is not misused for blackmail or fraudulent activities. Without clear regulations governing the use of personal data, the risk of privacy violations remains a significant drawback of AI-human relationships. Additionally, the absence of real emotions and shared experiences further complicates this dynamic.

Moreover, as the use of AI companions increases, so does the dependency on the companies and developers behind them. This dependence can become dangerous when it turns into influence, where users may be swayed to purchase or utilize specific products or services. Such scenarios raise ethical concerns about the trust, privacy, and integrity of the AI-user relationship.

AI companions may also fail to provide honest feedback or criticism to users. This raises ethical questions regarding honesty in the relationship. Furthermore, bias within AI systems complicates these dynamics, as AI can unintentionally lead to unethical decision-making. Users may not be aware of how biases in the AI's training data shape its responses, posing risks to fairness and ethics in decision-making processes.

Consequently, AI lacks the capacity to be an ethical friend, and numerous areas warrant concern regarding its role as a companion, requiring further supervision and guidance. As AI continues to evolve, it will be crucial to explore how to harness its potential for emotional support while mitigating the risks associated with these forms of companionship.

Human friendship is vital for societal growth; however, with AI as a friend, the definition of friendship is being redefined. AI sets higher expectations for availability and accessibility, creating a competitive edge that human friendships may struggle to match. AI should serve as a tool to aid human friendships and nurture social relationships, rather than replace them. Despite the substantial benefits AI companions can provide in alleviating loneliness, they should not be regarded as friends. A true friend should remain independent of software updates, monetary influence, and biases.

The consequences of choosing AI companions over human friends needs to be clearly communicated. How AI companions are developed to prevent people from perceiving them as friends is an essential topic for future research. Currently, there is significant scope for improvement in governance, data privacy, model (or developer) bias, and dependence on developers and the organizations they represent.

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