

AI Pet Dogs as Social Companions: Value Analysis, Market Trends, and Sustainable Strategies

Yuejia Xu

Email: iost222@qq.com

Abstract:

Social isolation is now widely recognized as a major public health issue around the world [8]. AI pet dogs, a relatively new type of socially assistive robot, are being introduced to address this problem through companionship [6]. This paper explores their various roles beyond simple company, looking closely at how they can provide emotional relief, help with basic mental health support, assist in caring for the elderly, and serve as teaching aids for children. Alongside this, the paper examines the current market situation—who is buying these products, how different brands compete, and where the market is heading. According to our analysis, AI pet dogs hold clear practical value and promising commercial potential, largely because of changing demographic trends and technology adoption. The paper ends by suggesting several practical marketing strategies that could help this technology grow steadily while staying grounded in genuine human needs.

Keywords: AI Pet Dogs; Companion Robots; Emotional Support; Geriatric Care; Education; Market Analysis; Marketing Strategy.

1. Introduction

There is a strange irony in modern life: as digital connectivity reaches nearly everyone, real-world loneliness seems to be rising just as fast [8]. People today work longer hours, families are more spread out, and vulnerable groups—such as elderly individuals living alone, single-person households, and stressed-out professionals—often find themselves without reliable emotional support. This social gap has created a huge demand for accessible and stigma-free companionship. At the same time, advances in artificial intel-

ligence and robotics have given birth to companion machines. AI pet dogs, which mimic the look and playful behavior of real dogs, sit right at the front of this trend [6]. They offer a major advantage over live pets: they don't trigger allergies, don't need walking or feeding, and can be kept in apartments that ban animals. In short, they make companionship accessible to almost everyone.

This paper takes AI pet dogs as a representative example to analyze both their social value and commercial viability. We will examine how they are being used in emotional care, mental wellness, elderly sup-

port, and childhood education. After that, we will look at the existing market and propose a marketing framework. The ultimate goal is to suggest a responsible and practical roadmap for AI pet dogs to grow into a meaningful tool for improving human happiness.

2. Analysis

2.1 The Multidimensional Social Value of AI Pet Dogs

Emotional Support and Companionship

The most obvious benefit of AI pet dogs is that they are always there, offering constant, non-judgmental interaction. Using built-in sensors, speech processing, and expressive algorithms, these robotic pets can simulate real interaction. For example, they react to petting with soft vibrations, can recognize their owner's voice, and will even initiate playful actions that make people feel less isolated. For seniors whose children have left home, or for young professionals who move often and cannot keep a real pet, this consistent presence serves as a dependable emotional anchor. It helps ease loneliness and creates a comforting daily routine without the unpredictability or heavy responsibilities that come with caring for a live animal.

Mental Health Intervention and Stress Reduction

Apart from companionship, AI pet dogs can act as stress-relief tools. Stroking their fur and hearing their simulated, rhythmic breathing can produce a calming effect, similar to what people experience in animal-assisted therapy—but it's much easier to access. Some advanced models can also guide users through simple breathing exercises, give positive reminders, or provide cognitive behavioral prompts. For someone dealing with daily anxiety, these features offer a quiet, first-line way to manage emotional struggles. It also removes the hesitation some people have about seeking formal therapy.

Comprehensive Elderly Care Integration

In the field of elderly care, these robotic dogs do more than just keep users company [1]; they can act as health assistants. They engage seniors with memory games or simple daily conversation, which helps keep the mind active and may even slow cognitive decline [2]. Safety is another big plus. Many AI dogs can remind users to take their medicine on time. Using built-in motion sensors, some can even detect a fall or inactivity and immediately alert a family member or caregiver. This kind of monitoring allows older adults to live more independently and with more dignity, while also giving their families much-needed peace of mind.

Interactive Childhood Development and Education

For children, AI pet dogs serve as interactive education-

al tools rather than passive toys. They can adjust their language and conversation to a child's age, helping with vocabulary, storytelling, or explaining simple science. More importantly, they can teach empathy and responsibility. When a child is tasked with "feeding" the robot or "grooming" its fur, they learn that actions have consequences, but without the risk of actually hurting a living animal. This approach can gently help kids understand non-verbal cues and build a foundational sense of kindness and accountability before they interact with real pets.

2.2 Market Status, Competitive Dynamics, and User Segmentation

The market for robotic companion pets is expanding quickly, and this growth is fueled by aging societies, the growing acceptance of mental health solutions, and rising AI literacy. The market itself is split into two main tiers. On the high end, you have products like Sony's Aibo—expensive, highly realistic, and packed with deep-learning technology [6]. On the mid-to-low end, there are simpler, app-controlled robots from start-ups. These often focus on one specific use, like telepresence or basic chat. This division leaves a clear gap for a product that balances genuine emotional intelligence and solid build quality at a mid-range price. When it comes to buyers, the demographics are diverse. The main target groups include isolated seniors, children who are digital natives, urban professionals wanting stress relief without pet care chores, and people who simply cannot own a real animal due to allergies or housing rules.

2.3 An Integrated Marketing Strategy

Positioning these AI pets is key—they shouldn't be sold as a replacement for real life, but rather as an intelligent addition to it [4]. A combined "phygital" approach would work well. For online marketing, short emotional videos on platforms like TikTok and Instagram, shared by micro-influencers in both wellness and tech, can show the product's value in daily life. For offline presence, pop-up "Companion Labs" in city malls would let people interact with the dogs, removing any hesitation they might have about buying a robot. On the B2B side, forming partnerships with nursing homes, therapy clinics, and kindergartens could create a steady stream of institutional users. Finally, a subscription model for new personalities, advanced health insights, and special learning content could create reliable recurring income and build long-term customer loyalty.

3. Discussion

Of course, the rise of AI pet dogs is not without ethical and practical challenges. The most fundamental issue is authenticity; however advanced the simulation, the emotional bond with a machine will never fully replicate the mutual vulnerability found in a connection with a living creature [3]. There is also a real concern that some users might become too attached. If people start substituting challenging human relationships with the predictable, unconditional "affection" of a machine, their loneliness could actually get worse instead of better [3]. Affordability is another barrier—if these devices remain too expensive, they could become a luxury rather than a widely available solution. The way forward involves making the hardware cheaper through mass production and smarter chips, while also refining the AI to be more emotionally nuanced. The guiding principle must be clear: this technology is here to augment human social lives and re-connect people, not replace the real thing.

4. Conclusion

In summary, this paper has taken a practical look at how AI pet dogs fit into today's society. Beyond being expensive gadgets, they show real promise in tackling serious modern problems—from loneliness and daily stress to aging care and childhood education. The market has huge potential, but it also brings complex ethical dilemmas and stiff competition. The long-term success of AI pet dogs will depend on three things: making the AI smarter and more responsive, designing the products with users' real psychological needs in mind, and basing the marketing message on true human value. If developers can bring these elements together, AI pet dogs may just move beyond being a fad and become a genuine tool for better, more connected lives.

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