AI in Healthcare for Pets – The Co-Caring Approach of AI-Tails

Angelica De Riggi[1], Johannes Löckinger[1], Stephan Jüngling[2]

[1] AI-Tails Switzerland
[2] University of Applied Sciences and Arts Northwestern, Switzerland
angelica.deriggi@aitails.com, johannes.loeckinger@aitails.com, stephan.juengling@fhnw.ch

Abstract

AI and IoT technologies are revolutionizing pet healthcare, enabling proactive health management and early disease detection. This paper introduces AI-Tails, a Swiss startup company that leverages AI to address the challenge of the early detection of feline diseases. AI-Tails uses behavioral and physiological data collected by the IoT-enabled smart cat home to provide real-time insights for pet owners and veterinarians. This co-caring approach enables continuous tracking of pet health indicators, improving care efficiency and accessibility. A business model canvas highlights key partners, value propositions, and customer segments of tech-savvy pet owners, veterinary clinics, and pet insurance companies. The paper also examines the market readiness for AI-driven pet health solutions, particularly in Switzerland and China. Initial validation through collaborations with the University Hospital in Bern strengthens the credibility of AI-Tails' solution. The AI-Tails Home system architecture, user interface, and data visualization methods are described, demonstrating the potential to improve pet well-being, fostering new business models and partnerships, and improving pet health care within the framework of Society 5.0

Keywords: AI, pet healthcare, feline health monitoring, digitalization in pet care, startup, co-caring

1. Introduction

AI-Tails, a startup founded by Angelica De Riggi (www.aitails.com) and inspired by the loss of her cat, Spooky, addresses a common challenge faced by pet owners: pets, especially cats, are often stoic creatures, masking pain and potential illness behind subtle behaviors that are often imperceivable to the human eye. As technology advanced into the era of Society 5.0, a human-centered integration of AI and the Internet of Things (IoT) emerged, revealing new possibilities for improving the well-being of our animal companions. The company focuses on the early detection of feline diseases using AI technology.

DOI: 10.5281/zenodo.15703685
In Proceedings: Corradini, F.; Hinkelmann, K.; Re, B., Smuts, H., eds. (2025). Proceedings of the 5th Conference Society 5.0 - Co-Existence Between Human Being and Machine Being, Vol. 2.
San Benedetto del Tronto, Italy, 25-27 June 2025.
https://doi.org/10.5281/zenodo.15422355

The startup has received recognition for its innovative approach. De Riggi, an alumna of the University of Applied Sciences and Arts Northwestern Switzerland (FHNW), has been featured in FHNW's news for her work with AI-Tails.

Automated pain recognition for cats using artificial intelligence (AI) represents a groundbreaking advancement in veterinary medicine. It addresses the inherent challenges of assessing pain in these animals, which often mask their discomfort. Traditional pain assessment methods rely heavily on subjective observations from pet owners and veterinarians, leading to inconsistencies and potential misdiagnoses. The integration of AI technologies into this process offers a more objective and accurate means of evaluating pain, utilizing advanced algorithms to analyze facial expressions, postural indicators, and behavioral cues in felines. Research has demonstrated that AI systems can effectively analyze specific facial features, such as ear position, eye dilation, and whisker orientation, to gauge pain levels in cats. Notable studies have reported pain recognition accuracy rates exceeding 77% when using manually annotated facial landmarks (Martvel, G. et al. 2024).

Behavioral indicators: While it remains challenging to diagnose disease from behavior alone, several known illnesses in cats are associated with recognizable behaviors (Camps et al., 2019; Horwitz & Rodan, 2018, Mills et al., 2020, Ezanno et al., 2023): Chronic health problems such as arthritis, dental disease and gastrointestinal problems can result in aggressive behavior in cats. Feline idiopathic cystitis, which can cause urinary tract disease, and osteoarthritis pain can result in urination outside the litter box. Feline orofacial pain syndrome is a neurological pathology that causes severe oral pain in cats and results in distinct behavior such as repetitive pawing of the mouth and mutilating the mouth and tongue. In cats with bladder pain, licking the lower (caudal) part of the abdomen can be seen. Finally, changes in eating or drinking habits (e.g., increased drinking of water is seen due to diabetes and kidney disease in cats), as well as increased grooming (cats tend to overgroom painful areas), are key behavior indicators for disease.

However, addressing such a complex challenge requires a deep understanding of both market needs and the technological landscape. AI-Tails is not just about technology; it is also about fostering trust among pet owners by demonstrating the value of early detection, reducing stress for both pets and their human companions.

Thus, in this paper, we will begin with an overview of the market for pet health technologies, focusing on the increasing demand for innovative and scalable solutions. Instead of a traditional literature review, we will examine the current trends and opportunities in the pet care market, setting the context for AI-Tails' value proposition.

2. AI in Petcare

Artificial Intelligence (AI) is increasingly transforming pet healthcare by enabling early detection of diseases and enhancing overall health management. Innovations such as AI-powered health scan applications analyze images of pets' eyes and skin to identify potential health issues, allowing for timely interventions. For instance, TTcare utilizes AI technology to detect early signs of diseases in pets through a simple smartphone app, boasting over 1.4 million scans performed with a 95% accuracy rate (AI For Pet - Making Pet Care Accessible For All, o. D.).

Moreover, AI is being integrated into veterinary practices to improve diagnostic accuracy and

efficiency (Akinsulie et al., 2024). Tools like AI chatbots provide pet owners with extensive information on animal health, research studies, and diagnostic options, offering a cost-effective and convenient alternative to traditional veterinary consultations (pmc.ncbi.nlm.nih.gov).

A business model canvas for AI-services in the predictive animal healthcare domain is shown in Fig. 1, highlighting key partners and value propositions for different customers. For AI-Tails key partners include FHNW, ETH and SZTU with the main customer segment being tech-savvy pet owners.

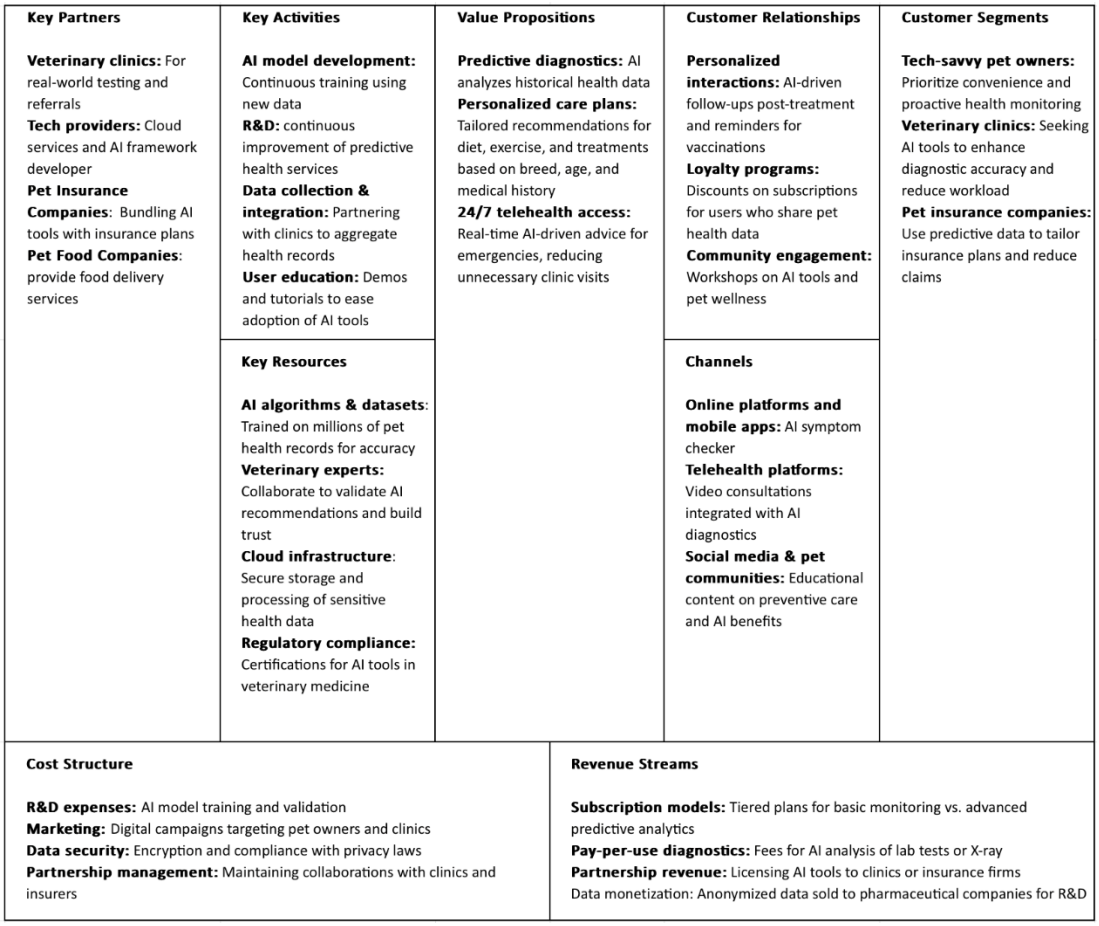

Fig. 1 – Business Model Canvas for AI-services in predictive animal healthcare domain.

The two elements from the BMC (Business Model Canvas), namely "customer segments" and "value propositions" provides a convenient and accessible way to examine whether the value propositions of a company's business model correlate with the actual needs of the customers it seeks to serve (Nielsen & Kyhnau, 2015).

In consideration of AI-Tails, the Value Proposition Canvas presents as follows:

Table 1 – Value Proposition AI-Tails.

Customer Jobs	Customer Pains	Customer Gains
• Functional: 24/7 Anomaly detection • Social: being tech-savvy using the latest technology • Emotional: reducing potential concerns, conveying a feeling of "safety"	• Undesired results: stressful veterinary visits and costs • Obstacles: affordability • Risks: uncertainty regarding data protection	• Needed: AI-based detection of distress or disease at early-stage and prevention of deteriorating conditions • Expected and desired: sophisticated design and compatibility with the smart home ecosystem • Unexpected: customizable design
Product and Services	**Pain Reliver**	**Gains Creators**
• Continuous monitoring of the pet's health indicators • Immediate notification of anomaly detections • Efficient product and business model design	• Longterm cost savings • Affordable subscription model • Data security as top priority	• 24/7 AI-supported pet monitoring • Focus on prevention • Insight into individual pet feelings

By continuously monitoring a pet's health indicators, the system helps owners feel more connected and reassured about their pet's well-being. Its customizable design and smart home compatibility enhance user experience, making it both a functional and aesthetically appealing solution. Ultimately, this personalized approach not only fosters a stronger bond between pets and owners but also minimizes health risks through early detection and intervention.

3. Market readiness for AI-Tails

The growing trend of pet humanization—where pets are increasingly seen as family members—has led to a rise in demand for advanced pet healthcare solutions, particularly in regions with aging populations and higher disposable incomes. Reports have also shown that loneliness during the COVID-19 pandemic resulted in an increase in the number of pet owners and a boom in the global pet care market. For example, this increase can be observed by the 180 percent rise in the share price of the online pet product retailer Chewy (CHWY, Yahoo Finance). These data points suggest that the pet care market is poised for growth and demonstrates resilience to economic downturns and COVID-19-related impacts. The rapid expansion of the pet care market is also being driven by advancements in digitalization. A study by Mordor Intelligence (2024) highlights the rising interest in pet health and wellness, with consumers seeking innovative solutions such as wearable health monitors, telemedicine platforms, and AI-powered diagnostic tools. Additionally, sustainability concerns are shaping purchasing behaviors, with a growing preference for eco-friendly pet food, biodegradable accessories, and ethically sourced

products. As AI and IoT continue to integrate into the pet care sector, the market is expected to see further expansion, positioning technology-driven pet health solutions as a key factor in shaping future industry trends.

Beachhead Market: According to the pet food association VHN, around 1.85 million cats lived as pets in Switzerland in 2023. Almost three out of ten Swiss households are home to a house cat, making cats the most popular pets among the Swiss. The market for pet-related products in Switzerland is flourishing. Swiss consumers spend around 600 million euros a year on their companion animals (Statista, n.d.), placing Switzerland in 10th place in a comparison of European countries. In Germany, the market for pet supplies is eight times as large as in Switzerland.

China: China presents a compelling opportunity for AI-Tails in both production and market expansion. As the world's leading manufacturing hub, China offers a highly developed supply chain ecosystem, cost-efficient production facilities, and access to cutting-edge technology, all of which are crucial for ensuring scalable and cost-effective manufacturing. Establishing production in China would enable AI-Tails to optimize its cost structure while maintaining high standards of quality and innovation. Additionally, the Chinese government's strong support for AI and biotechnology research, coupled with its investment in advanced manufacturing, provides an environment conducive to the development and refinement of AI-driven pet healthcare solutions.

Beyond its advantages as a production hub, China represents one of the most rapidly expanding pet care markets globally. With a booming pet industry and a growing middle class, pet ownership has increased significantly, particularly among urban millennials who view their pets as family members and prioritize their well-being. In 2023, the Chinese pet market was valued at over 66 billion USD, with projections indicating continued growth driven by rising disposable incomes, increased awareness of pet health, and a shift towards premium pet products and services. By entering the Chinese market, AI-Tails would gain access to a vast and increasingly affluent consumer base, creating opportunities for both direct-to-consumer sales and strategic partnerships with local distributors and veterinary networks.

Furthermore, China's position as a global leader in e-commerce and digital innovation presents unique advantages for AI-Tails' market entry and expansion. With platforms such as Tmall, JD.com, and Xiaohongshu (Little Red Book) playing a dominant role in consumer purchasing behavior, AI-Tails can leverage China's highly developed online retail infrastructure to efficiently market and distribute its products. This digital-first approach, combined with a localized marketing strategy, would allow AI-Tails to rapidly scale its presence in the region and establish itself as a key player in the premium pet healthcare segment.

4. AI-Tails Smart Home

Co-Caring Product Approach: As discussed by Aulet (2013), identifying the core of a product or service is crucial for differentiation and long-term success. AI-Tails' competitive advantage lies in its personalized customer service, a feature that is not easily replicable by competitors. AI-Tails leverages advanced AI to deliver highly tailored experiences, ensuring that each pet owner receives individualized support. This personalized approach enhances customer satisfaction, fostering long-term retention and significantly reducing churn rates. Additionally, satisfied customers become brand advocates, driving organic growth through positive word-of-mouth. Recognizing that pet owners prioritize the well-being of their beloved animals, AI-Tails aims to be more than just a service provider—it strives to be a trusted companion throughout the entire pet care journey. This co-caring philosophy strengthens the bond

between the brand and its customers, creating a community built on trust and empathy.

4.1 Validation and Credibility of the Product

A critical factor in establishing the credibility of AI-Tails' technology is its collaboration with University Hospitals. Partnerships with esteemed academic and medical institutions not only reinforce the scientific rigor behind the product but also enhance its trustworthiness in the market. By working closely with leading experts in veterinary medicine and artificial intelligence, AI-Tails ensures that its diagnostic tools and predictive models undergo rigorous testing and validation in real-world clinical settings. These collaborations strengthen the legitimacy of AI-driven pet healthcare solutions. This makes them more compelling for both investors and end-users.

4.2 Architectural Overview

Figure 3 presents a comprehensive overview of the AI-Tails Home technological framework, which serves as the foundation of the AI-driven pet healthcare system. This architecture seamlessly integrates data acquisition, cloud-based machine learning models, and a user-friendly mobile application to optimize pet health monitoring.

At the core of this system are smart food and drinking stations equipped with IoT sensors, including weight sensors, temperature monitors, and motion detectors. These sensors continuously collect real-time pet health data, which is then processed by AI algorithms. Key components of the analytical framework include computer vision for facial recognition and time-series analysis for behavioral pattern detection. The processed insights are displayed in real time for both pet owners and veterinarians, enabling proactive and informed healthcare management.

A structured data flow ensures that raw sensor inputs are securely transmitted to the cloud, where machine learning models analyze the information before delivering actionable feedback to the mobile application. Furthermore, the modular architecture supports scalability, allowing for seamless updates and integration with future diagnostic technologies, ensuring AI-Tails remains at the forefront of AI-driven pet healthcare innovation.

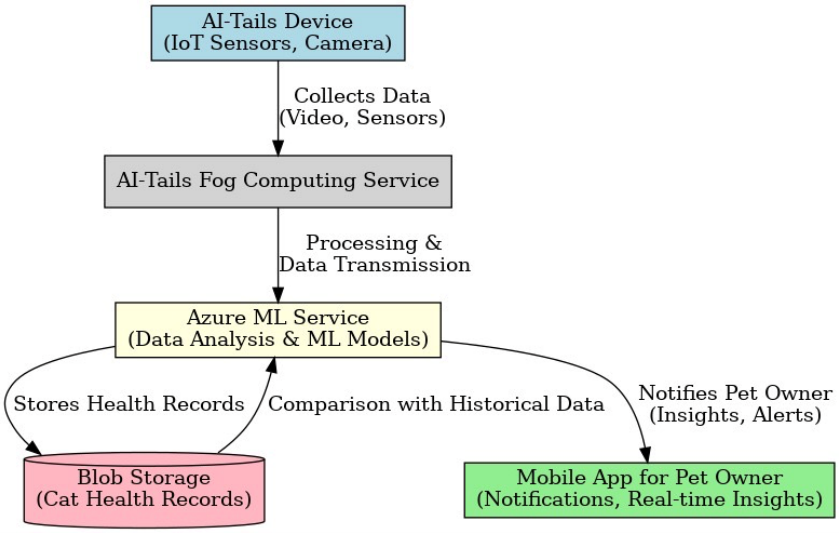

Fig. 3 AI-Tails Home: Data Architecture

The class diagram in Figure 4 represents the architecture of the pet health monitoring system using the *Ruby on Rails* framework specifically using *ActiveRecord* for database management, *ActiveJob* for background processing, and *ActionController* for handling web requests. It includes abstract classes such as *ApplicationRecord*, *ApplicationJob*, and *ApplicationController*, which provide base functionalities for models, background job processing, and request handling, respectively. The Cat class stores information about individual pets and maintains a one-to-many relationship with the *HealthRecord* class, which logs health-related data. The diagram illustrates how different components interact to facilitate continuous pet health tracking and anomaly detection.

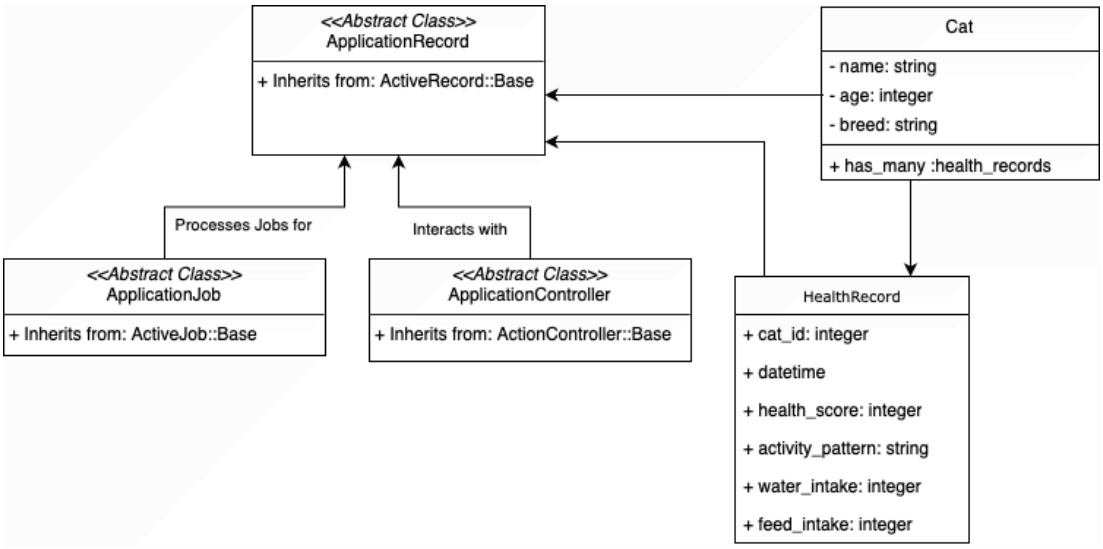

Fig. 4 AI-Tails Home: Class Diagram schematics.

4.3 User Interface and Data Visualization

To maximize usability, AI-Tails offers an intuitive dashboard and mobile application that visually presents health trends, alerts, and treatment recommendations. A potential screenshot of the app or dashboard shown in Figure 4 highlights how pet owners and veterinarians interact with real-time health data. The interface simplifies complex diagnostic information into easily interpretable insights, ensuring accessibility for both professionals and general users. By providing clear, actionable data, AI-Tails empowers pet owners to take a proactive approach to their pet's well-being, reinforcing the impact and credibility of the technology.

The mobile app displays key health indicators, such as the eating and drinking habits as well as the pain level of the cat in an easy-to-understand format. For example, a sudden high amount in drinking water is flagged with a red alert, prompting the pet owner to consult with their veterinarian as it may indicate kidney disease. The app also provides personalized recommendations based on the cat's individual health profile, such as adjusting food portions or increasing playtime. A key feature is the ability to share data directly with the veterinarian, facilitating remote monitoring and consultation.

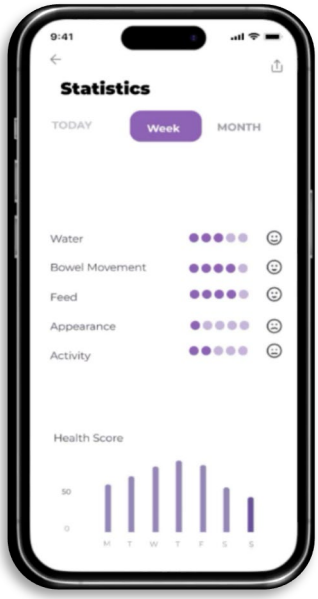

Fig. 5 Screenshot of an excerpt of the mobile app interface.

4.4 AI Algorithms and Implementation in AI-Tails

To process diverse data streams, we employ a combination of Convolutional Neural Networks (CNNs) for image-based health assessments, Long Short-Term Memory (LSTM) networks for time-series behavioral analysis, and gradient-boosted decision trees for predictive diagnostics. The CNN models analyze pet images for physical condition monitoring, while LSTM networks track fluctuations in activity levels, eating habits, and other behavioral patterns over time.

Feature Engineering and Data Preprocessing: Before feeding data into our AI models, we implement a robust feature engineering pipeline. Raw sensor data—such as movement patterns and food intake—is first cleaned and normalized to remove outliers. We then extract key behavioral indicators, such as sleep duration, gait irregularities, and feeding speed, which serve as inputs for anomaly detection algorithms. Additionally, feature selection techniques help optimize model performance by prioritizing the most relevant health markers.

5. Implementation and Real-World Application of AI-Tails

AI-Tails leverages cutting-edge AI technology to bridge the gap between pet owners and their pets, ensuring early detection and proactive management of animal health issues. Our system integrates non-invasive devices with real-time monitoring, providing actionable insights through an AI-powered analytics platform. During the current development phase, we are conducting a multi-stage deployment: an initial proof-of-concept (PoC) trial in controlled environments, followed by pilot studies in real-world settings with pet owners. These pilot studies will be focusing on usability testing, data accuracy, and AI-driven anomaly detection in behavioral and physiological patterns. By iterating based on user

feedback, we make sure to improve the system's sensitivity to early disease indicators, enhancing its practical utility.

5.1 Evaluation and Practical Lessons Learned

One of the most valuable lessons we learned was the importance of user-friendly design. Early prototypes contained too much raw data, making them overwhelming. To address this, we adopted a design-thinking approach, prioritizing clear, actionable insights over complex metrics. This not only improved usability but also built trust in AI-driven recommendations. By refining our interface based on real-world feedback, we significantly increased adoption rates and ensured that using AI-Tails feels intuitive and self-explanatory for our customers.

By transforming AI-driven insights into practical applications, AI-Tails embodies Society 5.0's vision of leveraging technology to enhance quality of life. Our iterative development process—rooted in real-world testing and continuous refinement—ensures that AI-Tails is more than just an innovation; it is a truly impactful solution for proactive pet health management.

6. Conclusions and Outlook

As we transition into Society 5.0, a vision that prioritizes human-centered innovation, the integration of AI into everyday life is no longer limited to human welfare alone—it extends to our companion animals. AI-Tails embodies this transformation by utilizing cutting-edge artificial intelligence to enhance feline healthcare, ensuring pets receive the same level of technological advancement as other aspects of modern living. By leveraging AI-powered behavioral analysis and IoT-enabled monitoring, AI-Tails aligns with the Society 5.0 ethos, where technology and compassion merge to create a more harmonious coexistence between humans and their pets.

The integration of AI-driven solutions in pet healthcare has far-reaching implications that extend beyond individual pet owners to the broader veterinary and research communities. AI-Tails facilitates a shift from reactive to proactive pet healthcare, enabling early disease detection and personalized treatment recommendations. This advancement enhances clinical efficiency, reduces emergency interventions, and optimizes veterinary resource allocation.

From a stakeholder perspective, veterinarians benefit from real-time, data-driven insights that improve diagnostic accuracy and streamline decision-making. Pet owners gain access to continuous health monitoring tools, empowering them to take preventive actions and reducing overall healthcare costs. Additionally, insurance providers can leverage AI-driven risk assessments to develop more tailored pet insurance plans, promoting cost-effective coverage options.

Beyond individual care, AI-Tails contributes to a larger ecosystem of predictive and preventive veterinary medicine. Aggregated data from AI monitoring systems supports veterinary research by identifying emerging health trends, improving disease surveillance, and informing public health initiatives. This data-driven approach enhances the collective understanding of pet health at a population level, fostering innovation in treatment strategies and veterinary best practices.

Furthermore, this technological shift aligns with the principles of Society 5.0, promoting a more connected, informed, and responsible pet owner community. As AI-driven pet healthcare becomes more prevalent, it has the potential to transform industry standards, reinforcing the importance of preventive care and ensuring better health outcomes for companion animals worldwide.

References

AI For Pet - Making Pet Care Accessible for All. (o. D.). AI For Pets. https://www.aiforpet.com/

Anderson, J. C., Narus, J. A., & Van Rossum, W. (2006). Customer value propositions in business markets. Harvard Business Review, 84(3), 1–8.

Aulet, B. (2013). Disciplined Entrepreneurship : 24 Steps to a Successful Startup. Wiley.

Akinsulie, O. C., Idris, I., Aliyu, V. A., Shahzad, S., Banwo, O. G., Ogunleye, S. C., Olorunshola, M., Okedoyin, D. O., Ugwu, C., Oladapo, I. P., Gbadegoye, J. O., Akande, Q. A., Babawale, P., Rostami, S., & Soetan, K. O. (2024). The potential application of artificial intelligence in veterinary clinical practice and biomedical research. Frontiers in Veterinary Science, 11, 1347550. https://doi.org/10.3389/fvets.2024.1347550

American Veterinary Medical Association (AVMA). (2024). Artificial intelligence poised to transform veterinary care. AVMA. https://www.avma.org/news/artificial-intelligence-poised-transform-veterinary-care

AS-WEF (Advancing Sustainability and the World Economic Forum). (2020). Raising ambitions: A new roadmap for the automotive circular economy. World Economic Forum. http://www3.weforum.org/docs/WEF_Raising_Ambitions_2020.pdf

ASPCA (American Society for the Prevention of Cruelty to Animals). (2025). Common cat diseases. Retrieved January 23, 2025, from https://www.aspca.org/pet-care/cat-care/common-cat-diseases

Bark and Whiskers. (2024). AI tools in pet healthcare. Bark and Whiskers. https://www.barkandwhiskers.com/2024-11-20-ai-tools-pet-healthcare/

Camps, T., Amat, M., & Manteca, X. (2019). A Review of Medical Conditions and Behavioral Problems in Dogs and Cats. Animals 2019, Vol. 9, Page 1133, 9(12), 1133. https://doi.org/10.3390/ANI9121133

CES. (2024). AI for PET introduces a seamless data-sharing solution between pet parents and veterinarians. CES. https://ces.vporoom.com/2024-01-03-AI-FOR-PET-introduces-a-seamless-data-sharing-solution-between-pet-parents-and-veterinarians

Cogniteq. (2024). IoT pet tech solutions: Future smart technologies for pets. Cogniteq. https://www.cogniteq.com/blog/iot-pet-tech-solutions-future-smart-technologies-pets

Conductive VC. (2024). The future of veterinary and pet healthcare: Learning from human healthcare innovations. Conductive VC. https://conductive.vc/the-future-of-veterinary-and-pet-healthcare-learning-from-human-healthcare-innovations/

Fernández-Carrión, E., Martínez-Avilés, M., Ivorra, B., Martínez-López, B., & Ramos, Á. M. (2017). Motion-based video monitoring for early detection of livestock diseases: The case of African swine fever. PLOS ONE, 12(9), e0183793. https://doi.org/10.1371/journal.pone.0183793

Forbes. (2024). Five emerging trends in pet health care for 2024 and beyond. Forbes. https://www.forbes.com/consent/ketch/?toURL=https://www.forbes.com/councils/forbesbusinesscouncil/2024/01/18/five-emerging-trends-in-pet-health-care-for-2024-and-beyond/

Gierej, S. (2017). Techniques for designing value propositions applicable to the concept of outcome-economy. Engineering Management in Production and Services, 9(1), 56–63. https://doi.org/10.1515/emj-2017-0006

Global Pet Industry. (2024). The powerful potential of artificial intelligence for pet healthcare. Global Pet Industry. https://globalpetindustry.com/article/the-powerful-potential-of-artificial-intelligence-for-pet-healthcare/

GlobalEdge. (2024). New technology revolutionizes pet care. GlobalEdge. https://globaledge.msu.edu/blog/post/57418/new-technology-revolutionizes-pet-care

Hart, B. L., & Hart, L. A. (2019). Sickness Behavior in Animals: Implications for Health and Wellness. Encyclopedia of Animal Behavior, 171–175. https://doi.org/10.1016/B978-0- 12-809633-8.20750-4

Horwitz, D. F., & Rodan, I. (2018). Behavioral awareness in the feline consultation: Understanding physical and emotional health: Https://Doi.Org/10.1177/1098612X18771204, 20(5), 423–436. https://doi.org/10.1177/1098612X18771204

InsightAce Analytic. (2024). Global petcare IoT platforms market. InsightAce Analytic. https://www.insightaceanalytic.com/report/global-petcare-iot-platforms-market-/1214

IoT Now. (2024). How PetPace and TelmyVet improve animal health. IoT Now. https://www.iot-now.com/2024/12/03/148377-how-petpace-and-telmyvet-improve-animal-health/

Martvel, G., Lazebnik, T., & Feighelstein, M. (2024). Automated video-based pain recognition in cats using facial landmarks. Scientific Reports, 14, 28006. https://doi.org/10.1038/s41598-024-78406-2

Market.us. (2024). AI in animal health market news 2024. Market.us. https://media.market.us/ai-in-animal-health-market-news-2024/

Mills, D. S., Demontigny-Bédard, I., Gruen, M., Klinck, M. P., McPeake, K. J., Barcelos, A. M., … Levine, E. (2020). Pain and Problem Behavior in Cats and Dogs. Animals 2020, Vol. 10, Page 318, 10(2), 318. https://doi.org/10.3390/ANI10020318

Osterwalder, A., Pigneur, Y., Bernarda, G., & Smith, A. (2015). Value Proposition Design: Entwickeln Sie Produkte und Services, die Ihre Kunden wirklich wollen. Die Fortsetzung des Bestsellers Business Model Generation! Campus Verlag

Pawprint Digital. (2024). Pet wellbeing wearables for health monitoring. Pawprint Digital. https://pawprint.digital/p/pet-wellbeing-wearables-health-monitoring

Pet Fair Vietnam. (2024). Explosive pet technology trends driven by AI & IoT applications. Pet Fair Vietnam. https://petfair-vietnam.com/explosive-pet-technology-trends-driven-by-ai-iot-applications/

PubMed Central. (2024). AI in pet healthcare: An overview. PubMed Central. https://pmc.ncbi.nlm.nih.gov/articles/PMC11056198/

ResearchGate. (2024). Implementation of an IoT-based pet care system. ResearchGate. https://www.researchgate.net/publication/343114482_Implementation_of_an_IoT_based_Pet_Care_System

Statista. (n.d.). *Pet market in Europe - statistics & facts*. Statista. Retrieved February 26, 2025, from https://www.statista.com/statistics/516035/cat-population-europe-switzerland/

The Business Research Company. (2024). Digital pet care products and services global market report. The Business Research Company. https://www.thebusinessresearchcompany.com/report/digital-pet-care-products-and-services-global-market-report

Washington Post. (2024). Smart pet technology and care with AI. Washington Post. https://www.washingtonpost.com/business/interactive/2024/smart-pet-technology-care-ai/

Weary, D. M., Huzzey, J. M., & von Keyserlingk, M. A. G. (2009). BOARD-INVITED REVIEW: Using behavior to predict and identify ill health in animals. Journal of Animal Science, 87(2), 770–777. https://doi.org/10.2527/JAS.2008-1297

Yahoo. (2024). https://finance.yahoo.com/quote/CHWY/

Yamazaki, A., Edamura, K., Tanegashima, K., Yuma, T., Yamamoto, M., Hirao, H., Seki, M., & Asano, K. (2020). Utility of a novel activity monitor assessing physical activities and sleep quality in cats. PLOS ONE, 15, e0236795. https://doi.org/10.1371/journal.pone.0236795