***Synopsis on***

# TO DEVELOP AND IMPLEMENT A WEBSITE FOR BUYING , SELLING AND ADOPTION OF ANIMALS AND PETS

***Submitted to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in partial fulfillment of requirement for the award of the degree of***

### BACHELOR OF ENGINEERING

**in Information Technology**

***Submitted By***

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**Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur 2024-2025**

**CERTIFICATE**

The synopsis titled **“TO DEVELOP AND IMPLEMENT A WEBSITE FOR BUYING ,SELLING AND ADOPTION OF ANIMALS AND PETS "**

submitted by **YASH JOGI , Student of VIIth Semester B.Tech** as a part of degree of Bachelor of Technology in **Information Technology**, by Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, shall be carried out under my supervision in the Department of Information Technology of **Nagpur Institute of Technology**, during academic session 2024-2025 The proposed subject of project and the synopsis enclosed here with have my approval.

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**2024-2025**

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1. **INTRODUCTION**

In today's digital age, the way we approach pet ownership and animal care has evolved significantly. The growing demand for convenient and reliable platforms to buy, adopt, and sell pets and domestic animals has led to the creation of dedicated websites. This report explores the development and impact of a comprehensive website designed to facilitate the proper buying, adopting, and selling of pets and domestic animals. Beyond transactions, the platform also offers a range of solutions addressing the diverse needs of animal owners, ensuring responsible pet ownership, and enhancing the welfare of animals. Through this website, we aim to connect animal lovers with the resources they need to make informed decisions, promoting the health and happiness of both pets and their owners.

Livestock owners now have a platform where they can easily showcase their animals to a wide range of interested buyers. This platform helps them get better returns without the need to attend animal fairs, deal with brokers, or sell under pressure at discounted prices, reducing the wait time for sales.For buyers, the platform simplifies the process of finding sellers, verifying livestock, negotiating prices, and making purchases, saving them time and effort.Users also gain access to a vast collection of knowledge, research, and literature on livestock to help ensure the well-being and productivity of their animals.

Livestock plays a crucial role in India's economy, culture, and society. Approximately 20.5 million people, or about two-thirds of rural India, rely on livestock for their livelihoods, with the sector providing employment to 8.8% of the population. Livestock contributes 4.11% to India’s GDP and 25.6% to the agricultural GDP. Cattle are particularly important, providing essential inputs like manure and draught power, which support agriculture and generate steady income for many rural families. Additionally, farm animals create numerous jobs and opportunities for small businesses.

In India, the livestock market is largely unorganized and spread out. Most purchases are made through traditional methods like fairs, word of mouth, or brokers, leading to information gaps and uneven distribution of high-quality breeds. As a result, livestock owners experience varying yields. Access to quality and affordable livestock services is often hindered by factors such as a lack of quality service providers, physical distances, price disparities, and socio-cultural barriers.

Petskart is a comprehensive ecosystem that introduces innovative business models to unlock the value and income potential of livestock. By leveraging the growing number of Internet users and advanced technology, it enhances value for all stakeholders. This ecosystem is designed to boost the contribution of livestock to the lives of individuals, entrepreneurs, and the nation as a whole.

1. **LITERATURE SURVEY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr no** | **Title** | **Author** | **Objective** |
| 1 | Digital pet product & service platforms | [Yixuan Feng](https://www.researchgate.net/scientific-contributions/Yixuan-Feng-2230225688?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19) | The empirical analysis of the industry, the fundamental components and growth drivers, and the business models that have potentials in China are presented and discussed with relevant case studies.  It provide solutions to different needs of consumers through websites, and at the same time solve the inconvenience of geographic location and communication. For China, the rise of the pet industry represents another step forward in the national cultural level. |
| 2 | Pet Adoption App to free animal shelters | **Bell S. Campanilla, Jonathan O. Etcuban , Angelbert P. Maghanoy , Pet Andrew P. Nacua , Narcisan S. Galamiton** | The study utilized the descriptive developmental type of research and administered two sets of the survey questionnaire. The respondents were the animal shelters, pet owners, and adopters in Cebu City, Philippines. |
| 3 | The Business model of digital platforms for the sharing economy intensive case study methodology for rover om pet boarding platform | Bo-Chiuan Su    Hongxi Lin\* and  Yu-Mei Wang | This research selected the emerging pet care industry as its scope and tok the [Rover.com](http://rover.com/) pet boarding digital platform, with the highest market share in the world, as the research object for an intensive case study. Three types of secondary data analysis were used: industry profile analysis, case information, and papers and journals. |
| 4 | Finding success in the pet e -commerce space. | [Lindsay Beaton](https://go.gale.com/ps/advancedSearch.do?method=doSearch&searchType=AdvancedSearchForm&searchMethod=subject+click&userGroupName=anon%7Eddb8923e&inputFieldNames%5b0%5d=AU&prodId=HRCA&inputFieldValues%5b0%5d=%22Lindsay+Beaton%22) | E-commerce is here to stay, and in a big way. Already a strongly growing sales avenue (with US$343.15 billion in online retail sales of physical goods in the U.S. alone in 2019, according to Statista data), the COVID-19 pandemic has caused a significant acceleration of the trend that is impossible to ignore. |
| 5 | The study of two competitive firms in the online pet industry and a business proposal solving stray pet issue in china. | [Hua Zong](https://dl.acm.org/doi/abs/10.1145/3450148.3450196#artseq-00001) | There are already firms, solving the problem using an online platform.The writer has studied Yourpet and smell me, two pet apps that ranks in the front when searching the word ‘pet’ in several app stores, and has then proposed a business model based on the findings, aiming to solve the problem of stray pets by. It was discovered that given a limited budget, an app should provide as much services as possible, while prioritizing some highly demanded ones. |
| 6 | Business plan on integrated digital platform for pet care service - the paw labs | Mr. Varun kacholia | Over the last few years and, especially in the last 10 years, Thailand has seen a steep rise in the number of clinics and hospitals that provide veterinary services. Businesses like Thonglor pet Hospital have gone on to open more than just 1 branch and are now present pan Thailand. However, with the change in human behavior towards their pets, pet parents are looking for more services that are personalized and curated just for their pets needs. With an increasing number of businesses in other industries going online and adopting digital as a core business model, the pet industry is headed that way too. |
| 7 | Pet care business opportunity in urban Thailand | Mr. Thawatchai maythayaskul | This study will focus on understanding the pet care market in Thai urban cities (with key focus on Bangkok) under the following study objectives. 1. To understand pet care industry within Thailand urban cities. 2. To seek out unmet needs to realize new business opportunities in the pet care industry that serve urban pet owners. |
| 8 | PetHub: A Platform for Pet Adoption | Ranjitha, Sadhana K | A single solution integrating three crucial modules—Admin, Shelter, and User—is required. The interface of the suggested system is easy to use, and its administration features are efficient, which will speed up pet adoption, encourage user involvement, and enhance shelter operations. Ultimately, through enabling better communication, administration, and assistance, this centralized approach will aid in finding pets loving homes and assist shelters in achieving their mission |
| 9 | Developing an animal rescue and adoption website . | Nguyen | The goal of this thesis was to develop a website for animal shelter organizations. This platform allows individuals to apply for pet adoption through an application form. Additionally, the website enables the organization to receive donations, either as one time contributions or monthly |
| 10 | Zilla: An Animal Based Social Media Platform | [Rakshitha Kasun](https://ieeexplore.ieee.org/author/37088412074); [L.G. Harsha Mahesh](https://ieeexplore.ieee.org/author/37088411609); [Y.A.D.I. Yapa](https://ieeexplore.ieee.org/author/37088412267); [S.M.S.D. Suwendra](https://ieeexplore.ieee.org/author/37088411728); [Nuwan Kodagoda](https://ieeexplore.ieee.org/author/38188449900); [Kushnara Suriyawansa](https://ieeexplore.ieee.org/author/37086847795) | The study utilized the descriptive developmental type of research and administered two sets of the survey questionnaire. The respondents were the animal shelters, pet owners, and adopters in Cebu City, Philippines. |

**3.PROBLEM STATEMENT**

**Bridging the Gap in the Unorganized Indian Livestock Market**

The Indian livestock market, despite its significant contribution to the economy, remains largely unorganized and characterized by traditional methods of buying and selling. This disorganization leads to several challenges, including:

* **Information Asymmetry:** A lack of transparency and access to reliable information hinders informed decision-making for both buyers and sellers.
* **Inefficient Transactions:** The traditional methods are time-consuming, often involving intermediaries, and can lead to price fluctuations and quality concerns.
* **Limited Access to Quality Services:** Livestock owners struggle to access affordable and quality services, such as veterinary care, breeding, and feeding.
* **Disparity in Market Outcomes:** The unorganized nature of the market results in varying yields and income for livestock owners.

Petskart aims to address these challenges by creating a centralized platform that leverages technology to:

* **Improve Market Efficiency:** Facilitate direct interactions between buyers and sellers, reducing the role of intermediaries and ensuring fair pricing.
* **Enhance Information Access:** Provide comprehensive information on livestock breeds, health, and market trends.
* **Expand Access to Services:** Connect livestock owners with a network of qualified service providers.
* **Promote Sustainable Livestock Practices:** Encourage responsible animal husbandry and welfare.
* **Centralizes information:** Offers a centralized hub for livestock-related information, including market trends, prices, and best practices.
* **Streamlines transactions:** Simplifies the buying and selling process, allowing livestock owners to connect directly with buyers and sellers.
* **Enhances access to services:** Connects livestock owners with a network of qualified service providers, such as veterinarians and breeders.
* **Promotes the distribution of high-quality breeds:** Facilitates the trade and distribution of high-quality livestock breeds, improving the overall quality and productivity of the Indian livestock sector.

By addressing these issues, Petskart aims to contribute to the growth and development of the Indian livestock sector, improving the livelihoods of farmers and promoting sustainable animal welfare.

## 4.PROPOSED APPROACH

### Core Features

1. **User Profiles:**
   * Create profiles for both pet owners and livestock owners.
   * Allow users to upload profile pictures, provide contact information, and specify their preferences or needs.
2. **Pet Listings:**
   * Enable users to create detailed listings for pets and livestock, including:
     + Species, breed, age, gender, and health status
     + Photos and videos
     + Description of the animal's personality, habits, and training
     + Pricing information
3. **Search and Filtering:**
   * Implement a robust search function to allow users to find pets or livestock based on various criteria, such as location, breed, age, and price.
   * Provide filtering options to narrow down search results and help users find the perfect match.
4. **Adoption and Purchase Processes:**
   * Facilitate the adoption process for pets, including:
     + Application forms, Background checks ,Adoption fees
   * Streamline the purchase process for livestock, including:
     + Negotiation, Payment options ,Delivery arrangements by the buyer and seller .
5. **Community Features:**
   * Create forums and discussion boards for users to connect, share experiences, and seek advice and Organize online events and meetups to foster a sense of community.

### Additional Future scope Features

1. **Veterinary Services:**
   * Partner with local veterinarians to offer online consultations and discounted services.
   * Provide information on pet health, care, and nutrition.
2. **Pet Training Resources:**
   * Offer online training resources, such as articles, videos, and courses.
   * Connect users with professional dog trainers and behaviorists.
3. **Pet Insurance:**
   * Partner with insurance providers to offer affordable pet insurance options.
4. **Pet Products and Supplies:**
   * Provide a marketplace for pet products and supplies, including food, toys, accessories, and grooming products.
5. **Livestock Resources:**
   * Offer information on livestock care, breeding, and management.
   * Connect livestock owners with experts and service providers.

## 5.METHODOLOGY

1. **Needs Assessment:**
   * Conduct in-depth interviews with potential users (livestock owners, buyers, and service providers) to understand their specific needs and pain points.
   * Analyze existing livestock market trends, regulations, and best practices.
2. **Design and Wireframing:**
   * Create a user-friendly interface that is visually appealing and easy to navigate.
   * Develop wireframes to outline the layout and structure of the website's pages.
3. **Development and Coding:**
   * Use a suitable web development framework (e.g., React, Angular, Vue) to build the website's frontend and backend.
   * Ensure the website is mobile-responsive and compatible with different browsers.
4. **Content Creation:**
   * Develop high-quality content, including articles, guides, and resources, on topics related to livestock care, breeding, and market trends.
   * Create a blog or knowledge base to share valuable information with users.
5. **Database Design:**
   * Design a robust database to store user data, livestock listings, service provider profiles, and other relevant information.
6. **Testing and Quality Assurance:**
   * Thoroughly test the website to identify and fix any bugs or errors.
   * Conduct user testing to gather feedback and ensure the website meets user expectations.

### Platform Features

* **User Profiles:** Allow users to create profiles, upload livestock listings or service offerings, and manage their account settings.
* **Search and Filtering:** Implement a powerful search engine to help users find specific livestock or services based on various criteria (e.g., breed, location, price).
* **Messaging and Negotiation:** Enable users to communicate directly with each other to negotiate prices, discuss terms, and arrange transactions.
* **Payment Gateway:** Integrate a secure payment gateway to facilitate online transactions.
* **Reviews and Ratings:** Allow users to rate and review livestock sellers, buyers, and service providers to build trust and reputation.
* **Educational Resources:** Provide a wealth of educational resources, including articles, videos, and guides, on livestock care, breeding, and market trends.
* **Community Forums:** Create online forums where users can discuss livestock-related topics, share experiences, and seek advice.

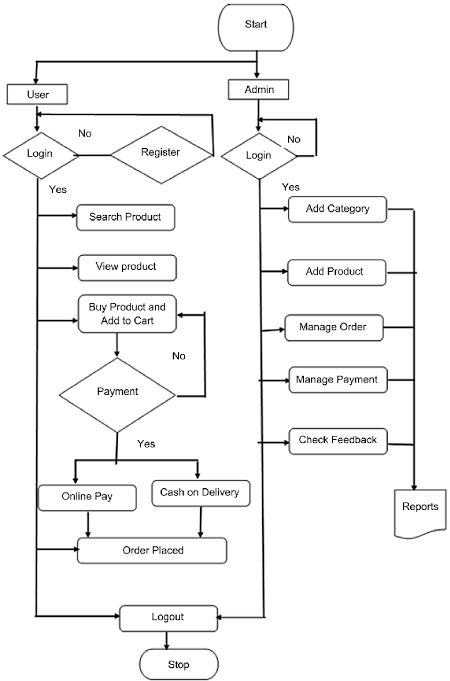
### Marketing and Promotion

* **Search Engine Optimization (SEO):** Optimize the website for search engines to improve its visibility and attract organic traffic.
* **Social Media Marketing:** Leverage social media platforms to reach a wider audience and engage with potential users.
* **Content Marketing:** Create and share valuable content to attract and retain users.
* **Partnerships and Collaborations:** Partner with relevant organizations and businesses to expand the website's reach and credibility.

### Data Analysis and Improvement

* **Track website usage:** Monitor key metrics such as website traffic, user engagement, and conversion rates.
* **Analyze user feedback:** Collect and analyze user feedback to identify areas for improvement.
* **Iterate and update:** Continuously update and improve the website based on user needs and market trends.

**6.Flowchart**



**7.TOOLS FOR DEVELOPMENT**

### Technology Stack

* **Frontend:**

React, Angular, HTML,CSS,JS for a modern and interactive user interface.

* **Backend:**

Node.js or JAVA (Django or Flask) for efficient server-side operations.

* **Database:**

MongoDB or PostgreSQL for flexible data storage and retrieval.

* **Cloud Platform:**

AWS, GCP, or Azure for scalability and reliability.

* **Payment Gateway:**

Stripe or PayPal for secure online payments.

By implementing these features and leveraging appropriate technology, Petskart can become a leading platform for pet and livestock owners in India, providing a convenient, reliable, and informative experience for all users.

## 8.EXPECTED OUTCOME

## Expected Outcomes of the Petskart Website

**1. Improved Efficiency and Transparency in Livestock Transactions:**

1. **Reduced transaction costs:.**
2. **Faster sales**
3. **Greater transparency**

**2. Enhanced Access to Quality Livestock and Services:**

1. **Wider selection of breeds:**
2. **Verified sellers.**
3. **Easy access to services**.

**3. Increased Economic Opportunities for Livestock Owners and Entrepreneurs:**

1. **Higher incomes:**
2. **New business opportunities**
3. **Job creation**

**4. Improved Animal Welfare:**

1. **Responsible pet ownership**
2. **Reduced animal suffering**
3. **Support for animal shelters**

**8. PLAN DURING THE TENURE OF THE PROJECT WORK**

The expected time period for the completion is schedule as:-

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Task /Time** | **July 2024** | **August 2024** | **September2024** | **October7/10/24** | **December2024** | **January - Feb 2025** | **March- April 2025** |
| **1** | **Project topic Finalization**  **And Title Approval** |  |  |  |  |  |  |  |
| **2** | **Preparation of synopsis based on approved title. And study of different algorithms** |  |  |  |  |  |  |  |
| **3** | **Implementation of first module and Synopsis Submission.** |  |  |  |  |  |  |  |
| **3** | **Implementation of Second module.** |  |  |  |  |  |  |  |
| **4** | **Implementation of Third module.** |  |  |  |  |  |  |  |
| **6** | **Result verification and testing** |  |  |  |  |  |  |  |
| **7** | **Thesis Writing** |  |  |  |  |  |  |  |

Table 1: Project Work Plan

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