LOST CATS AND DOGS REPORTING AND REGISTRATION SYSTEM FOR IMUS ANIMAL POUND WITH BREED IDENTIFIER

An Undergraduate Thesis
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of the requirement for the degree of
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SALES, MERLIN MIGUEL C.
DE JUAN, MARTIENE ANN
PEREZ, ACE J.
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ABSTRACT

SALES, MERLIN MIGUEL C., DE JUAN, MARTIENE ANN F., PEREZ, ACE J., LOST CATS AND DOGS REPORTING AND REGISTRATION SYSTEM FOR IMUS ANIMAL POUND WITH BREED IDENTIFIER. Undergraduate Thesis. Bachelor of Science in Computer Science, Cavite State University, Imus City, Cavite. July 2023. Adviser. Ms. Grace S. Ibañez

This study, titled "Lost Cats and Dogs Reporting and Registration System for Imus Animal Pound with Breed Identifier," addresses the critical need for efficient stray animal management in Imus Animal Pound. It proposes a dual-platform system: an Android application enabling users to report stray animals and identify their breeds digitally and a web-based animal registration system facilitating efficient animal tracking. The study relied on the insights gathered from potential adopters, Imus City Animal Pound officials, and IT experts, coupled with a review of pertinent literature.

The Prototyping Development Cycle directed the creation of both platforms, with TensorFlow and Python instrumental in training models for breed identification. The application was developed using Android Studio and Java Language, while HTML, CSS, JavaScript, Phpmyadmin, and SQL underpinned the web-based registration system. The system was assessed across multiple parameters - functionality, usability, reliability, efficiency, and portability - with respondents drawn from relevant stakeholders.

The system demonstrated good overall performance, with an average rating of 3.18 in functionality, 3.60 in usability, 3.35 in reliability, 3.42 in efficiency, and an impressive 3.87 in portability. The study concluded that the developed system effectively met its objectives, indicating its potential to streamline animal management in the Imus Animal Pound. This approach is valuable for the local government and broadly applies to similar entities managing stray animals. Despite the proficient ratings, the research underscores the scope for continuous system improvements for optimal utilization.

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INTRODUCTION

Based on the Philippine Animal Welfare Society (PAWS) (2020), approximately 12 million stray cats and dogs wander the streets in the past few years. Each year, thousands of animals die because of starvation, animal diseases, infection upon open wounds due to severe animal fights, and more yet being euthanized. As a result, there are many abandoned animals on the streets, wherein displays a hidden threat to the publics' health security. Adopting a pet is a big decision, and prospective pet owners frequently have certain preferences and needs. Identifying the breeds of dogs and cats is a critical component of animal welfare, enabling the proper care and management of shelter populations, and improving the adoption process. According to Lin, L., & Link, Y. (2020) biologists have recently shown a strong interest in the field of animal detection for wildlife. Manually recognizing all the different species may be a difficult process due to the diversity of the animals. Recent technological advancements have enabled the development of mobile phone applications that can aid in the accurate identification of dog and cat breeds.

In the Philippine province of Cavite, the city of Imus Malagasang is home to the Imus Animal Pound, a government-run animal pound. It is accountable for capturing and caring for stray animals, as well as for enforcing animal control regulations and encouraging responsible pet ownership in the neighborhood. Professional staff members work at the facility, providing the animals with food, shelter, and medical care until owners come to pick their pets up or until

the pets are adopted into new homes. The Imus Animal Pound's main goal is to care for animals, but through serving as an informational and advocacy resource, it also works to advance animal welfare in the community.

The Imus Animal Pound faces several challenges in managing the increasing number of existing and pre-existing records of animals in its care. Inadequate record management makes tracking animals' well-being and status easier, leading to accurate data. With the increasing rates of animal strays, an optimal animal registration process should be carried out as a suitable countermeasure. This study offers a better way to report stray animals than calling the Animal Pound or going to the Barangay Hall through innovative technological solutions. The concept of 'resident and pound collaboration' is pivotal to this endeavor and involves the participation of residents in collaboration with animal shelters or pounds. The interaction could lead to more efficient rescue operations, better animal care, and a higher rate of successful adoptions, thus tackling the pressing issue of stray animals more effectively. The researchers decided to carry out this study to address such issues at the Imus Animal Pound.

Statement of the Problem

Generally, this study will assess the development of lost cats and dogs reporting and registration system for Imus Animal Pound with breed identifier.

Since the Imus Animal Pound is responsible for rounding up and impounding stray animals in the city, it can be challenging for the pound to survey and travel around the cityscape to seize homeless animals due to several factors, including the size of the city, the sporadic phone calls from residents, the limited resources available to the pound, and the lack of a cohesive system for tracking and recording captured animals. The study suggests a solution: an application enabling users to alert the city pound of stray animal sightings in their vicinity. With that said, *"How to create an application that allows users to submit reports of stray animals?"*