

# CHAPTER 1

## INTRODUCTION

### 1.1. Background

Pets may act as human companions. This can be a distinct solution for those who require friends or entertainment. However, these pets must be cared for, have their basic requirements fulfilled, and be given a proper home. The pets they care for are generally loyal, beautiful, and can entertain their owners. This has also been regulated in law number 18 of 2009, which states that according to article 66 on Animal Husbandry and Health, which states that the maintenance, security, care, and protection of animals is carried out as well as possible so that animals are free from hunger and thirst, illness and abuse, and fear and depression [1].

Feeding the pet is the most fundamental fulfillment of pet rights. This is frequently taken for granted and not given much thought. However, feeding pets is often an issue, especially when there is business or activities going on away from home. Owners frequently forget to feed their pets, like in the case of the cat. Because cats are considered to be simple to have and care for pets. In fact, feeding cats and cat must be carried out carefully because these creatures are categorized as ordinary. Cats and cat are typically fed 2-3 times each day, with quantities according to their age, weight, and activity level. According to the New York Veterinary Medical Center, mature cats consume roughly 2% of their body weight [2].

Meanwhile, adult cat eat approximately 10% of their body weight, according to Dr. Elvina Ruth. Feeding too frequently or too much, for example, might result in excess weight. Obese cats are more likely to develop osteoarthritis and diabetes mellitus than normal-weight cats [3]. This has the potential to decrease the condition of cats.

Manual feeding tends to require the use of human effort, and animal owners must manually feed when hungry with the proper portions and be aware of their food reserves. Manual feeding is inefficient since it might result in over or underfeeding, both of which are harmful to pets. Most pet owners also overlook or

disregard the food supply in the feed storage container, which means that many pets remain starved if their food supply runs out.

A pet feeder is an animal feeding instrument that can automatically arrange feeding schedules and regulate animal feeding without the need for human efforts. Furthermore, this instrument can track the food supply. The goal of this tool is to make it easier for pet owners to not bother about their pets' feeding mechanisms when they are occupied. Numerous pet feeders are currently available for various animal feed equipment. However, most of them tend to neglect the availability of food in the food storage area. If pets' feed is left unchecked for an extended period of time, this situation will have a negative impact on pets. Pet feeders will not totally aid in food control even though the toll is already being used and sold.

Therefore, this study developed a pet feeding tool, website, and Blynk application platform to overcome these problems. The technology is intended to allow pet owners to regulate the amount of food that comes out based on the weight of the animal and to monitor the current food supply. The pet owner may operate the pet feeding device through the Blynk platform on the website itself, with feeding timings feature that can be configured according to the required time. Thus, this tool can make feeding pets easier, and owners won't have to worry about their pets starving even if they leave the house for a longer time.

## **1.2. Problem Formulation**

This thesis considers the limitations of animal owners in monitoring their pets in the high activity level. Manual feeding of animals leads to obesity of animals. so that automatic animal feeding is needed that can be controlled using a mobile device.

## **1.3. Objectives**

In this section, the purpose of the thesis will be explained as follows:

1. Monitor pet feed supplies using Blynk platform or website.
2. Control feeding time using Blynk platform.
3. Control food that comes out based on the pet's weight.

#### **1.4. Scope of Works**

In this section, the scope of work related to problem formulation can be identified as follows:

1. Blynk can manage feeding time.
2. Blynk Platform and website manage the portion of the meal based on the weight of the animal.
3. Blynk Platform and website can monitor food supplies.

#### **1.5. Research Method**

This research method applied in this thesis are:

1. Literature study, get data from journals, papers, and others related to the Blynk platform, website and pet feeder.
2. Design of the tool control system flow.
3. Software development for pet feeder system.
4. Simulation hardware built can be controlled remotely through the Blynk platform and website.

#### **1.6. Bachelor Thesis Organization**

The rest of this thesis is organized as follows:

- **CHAPTER 2 BASIC CONCEPT**  
This chapter provides basic theory, tools, and applications to create a Blynk platform and website.
- **CHAPTER 3 SYSTEM METHOD**  
This chapter provides the flowchart, workflow, algorithm, and method to run the Blynk platform and create a website for running a pet feeder.
- **CHAPTER 4 PERFORMANCE EVALUATION**  
This chapter contains the results of service quality and analysis from testing the pet feeding system, testing the website that has been created, and testing the Blynk application that has been made.
- **CHAPTER 5 CONCLUSIONS**  
This chapter contains the conclusions drawn from this thesis and accommodates the use of suggested ideas for future research in the area of the same interest.