

UNIVERSITI TEKNOLOGI MARA

**DESIGN & FABRICATION OF
AUTOMATIC PET FOOD
DISPENSER**

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ABSTRACT

Inconsistent pet feeding is one of the possible causes of rising pet obesity due to the inconsistency of manual work as humans are not entirely free from making mistakes. It can be problematic when the owner forgets to give the food, or either giving too much or too less food which affects the pet's eating schedule. This project aims to provide an efficient and reliable solution for pet owners who want to ensure that their pets receive punctual and accurate feeding, even when they are not at home. Arduino UNO, which is powered by a micro-USB, will be used as a microcontroller to control the opening of the storage according to the set time. The end product is an automatic dispenser that will automatically dispense the food. The device is easy to use, and the feeding schedule can be easily adjusted to suit different pet's needs.

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Finally, it is my ultimate goal to become a mechanical engineer and to contribute in the field of my dreams. This dissertation is a piece of work dedicated to showcase my passion and love for the field of mechanical engineering.

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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Owning a pet means carrying a responsibility to make sure that it is treated with sufficient care and compassion, including the preparation & consumption of food for it to stay alive and healthy just like every living thing that exists. The most basic and conventional way to feed a pet is by preparing the food in a bowl. The time and frequencies are decided by the owner, which requires the owner to remember if it has been done on a daily basis.

Given that humans are not entirely free from making mistakes, there are some issues that arise with this usual method of feeding. There can be situations when the owner will be away from home for multiple days, or the owner might be sick and does not have enough energy to prepare the food, or the owner simply forgot to do it due to being too busy. All of these issues point to one main cause, which is the weakness of something that entirely relies on human judgement and action. As the solution for this matter, ideas from the electrical and programming field can be implemented to existing basic pet food bowls to make sure that the pet food is consistently prepared by itself. This ultimately improves the convenience of pet owners in their daily lives.

This decision to choose to design and build this pet food dispenser comes from the idea of combining mechanical, electrical and programming knowledge gained throughout this diploma program into practical use. Given that automation is an important aspect in the mechanical engineering field, the direction of this project is planned for it to fit in as a part of that category.