

UNIVERSITI TEKNOLOGI MARA

**DESIGN, ANALYSIS AND
FABRICATION OF AUTOMATIC
PET FEEDER**

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ABSTRACT

The automatic pet feeder project is focused on developing and deploying a system that can automatically feed pets on a regular and consistent schedule without the need for human intervention. The goal of this project is to improve the quality of life for pet owners by relieving them of the duty of feeding their animals at regular intervals. The automatic pet feeder is made up of a container for the pet's food and a mechanism that releases the necessary quantity of food at predetermined intervals. Sensors built into the apparatus will be able to detect the presence of food that is still in the container. The bowl of the container will be kept in outer position when the food is still in the bowl. But when the food has already finished in the bowl, it then automatically moving inwards to keep the bowl clean inside the machine. In order to programme the behaviour of the device, the project also necessitates the integration of hardware elements like motors, sensors, and microcontrollers. An effective and dependable automatic pet feeder that can improve pet feeding routines and foster the wellbeing of both pets and their owners will be the project's final product.

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TABLE OF CONTENTS

	Page
CONFIRMATION BY SUPERVISOR	3
AUTHOR’S DECLARATION	4
ABSTRACT	5
ACKNOWLEDGEMENT	6
TABLE OF CONTENTS	7-8
LIST OF TABLES	9
LIST OF FIGURES	10
LIST OF ABBREVIATIONS	11
 CHAPTER ONE: INTRODUCTION	 12
1.1 Background of Study	12
1.2 Problem Statement	13
1.3 Objectives	14
1.4 Scope of Study	14
1.5 Significance of Study	15
 CHAPTER TWO : LITERATURE REVIEW	 16
2.1 Benchmarking/Comparison with Available Products	16
2.2 Review of Related Manufacturing Process	17-18
2.3 Patent and Intellectual Properties	19-21
2.4 Summary of Literature	22-23
 CHAPTER THREE : METHODOLOGY	 24
3.1 Overall Process Flow	24
3.2 Detail Drawing	25-30
3.3 Engineering Calculation and Analysis	31-43
3.4 Bill of Materials and Costing	44
3.5 Fabrication Process	45-46

CHAPTER ONE

INTRODUCTION

1.0 Background of Study

Pets are often considered as a part of the family and pet owners are responsible for providing them with proper care and attention. One of the most important aspects of pet care is feeding them on a regular schedule. Pet owners often face difficulty in maintaining a consistent feeding schedule due to various reasons such as their work schedules, travel plans or forgetfulness. This can be particularly problematic for pet owners who have to leave their pets alone at home for extended periods of time. Automatic pet feeders have been developed to address this issue by providing a reliable and convenient feeding schedule for pets even when their owners are away.

Automatic pet feeders are a type of device that dispenses pre-determined amounts of food at set times of the day. These feeders are designed to be programmable, allowing pet owners to set the exact amount of food and feeding times for their pets. Automatic pet feeders offer several advantages such as maintaining consistent feeding schedules even when pet owners are not at home, ensuring pets receive the correct amount of food at the right times, improving portion control, and reducing the risk of overfeeding or underfeeding.

Despite the benefits of automatic pet feeders, there are still some challenges that need to be addressed. For instance, the current automatic feeders in the market often require a power source to operate, which may not be practical in all circumstances, especially during power outages. Additionally, existing automatic pet feeders tend to be bulky and difficult to move, making it challenging for pet owners to transport them while traveling with their pets.