

UNIVERSITI TEKNOLOGI MARA

**DESIGN AND FABRICATION OF AN
ADVANCED FOOD FOLDER
MACHINE**

ALYA BINTI AMENUDDEN

Dissertation submitted in partial fulfillment
of the requirements for the degree of
Diploma
(Mechanical Engineering)

College of Engineering

Feb 2023

ABSTRACT

Nowadays, a lot of people do small food businesses at their own home [1]. They sell in huge batches to sell it to other people. This project is designed for the home business owners to manage business at home even more efficiently. The machine that will be designed is called advanced food folder. It is mainly for spring rolls and roti jala. The problem statement for this project is that some small business owners are struggling with business management and this project would help to ease the owners' work successfully. Folding food can be time and energy consuming for the users. By designing and fabricating an advanced machine that could solve this problem would help the users in their daily lives. This project will use the method of designing in SOLIDWORKS software and by using this software simulation, it could tell that the design is successful or not successful. The significance of this project is that the cost of the products that are produced will be lesser than before due to the help of the machine. The next significance is less assistance needed for the small business owners.

ACKNOWLEDGEMENT

In the name of Allah, the most gracious and the most merciful. Firstly, I am deeply thankful to the Almighty for giving me the knowledge, strength, opportunity, and ability to embark on my diploma and for finishing this full of challenges of a journey.

Secondly, I would like to thank my supervisor, Ir. Ts. Haszeme bin Abu Kasim whose worthy guidance and professional attitude is deeply appreciable in completing this very dissertation.

Thirdly, to my parents, who have supported me along the way, I am deeply grateful for them.

TABLE OF CONTENTS

	Page
CONFIRMATION BY SUPERVISOR	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS	vi
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	xii
CHAPTER ONE : INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Objectives	2
1.4 Scope of Study	2
1.5 Significance of Study	3
CHAPTER TWO : LITERATURE REVIEW	4
2.1 Benchmarking/Comparison with Available Products	4
2.2 Related Manufacturing Process	5
2.2.1 Industrial consideration	5
2.2.2 Industrial demand	6
2.3 Sustainability/Ergonomic Related Items	15
2.4 Patent and Intellectual Properties	16
2.5 Summary of Literature	19
CHAPTER THREE : METHODOLOGY	20
3.1 Overall Process Flow	20
3.2 Detail Drawing	23

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Folding spring rolls or *kuih roti jala* would be time and energy consuming for small business owners. The owners must be doing greatly by working on to grow the owners' small business to the fullest. It is expected to make such income to afford living modern lives [2]. Furthermore, the small business owners would use own abilities to fold the *kuih* with bare hands [3]. By doing this, the owners would spend so much time and use so much energy to fold the *kuih* with such speed because the owners would not want to disappoint customers by being too slow at doing job. The risks of getting hand cramps would increase because imagine when someone produces so many *kuih* pieces and adding with when the owners do not get any assistance from anyone [4]. Getting someone to help the owners run small business also would mean the owners have to pay the assistants for helping with the owners' work. This means the owners have to give out more money [5]. In addition to these serious struggling issues, a survey has shown that probably by not having a machine that could help the owners with producing the *kuih* is positively associated with more stressful times. In view of the survey answers, a machine with such help is very much needed.