

**UNIVERSITI TEKNOLOGI MARA**

**ADJUSTABLE AUTOMATIC  
CLOTHES FOLDING MACHINE**

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## **ABSTRACT**

The Adjustable Automatic Clothes Folding Machine is an invention that designed to revolutionize and help human to manage and organize our clothes . By inventing an automation technology to manage one of our daily routine will resulted to an efficient and time-saving solution for folding a wide variety of garments . The problem that face by our community while manually folding their clothes are they may faced back pain . Other than that , majority students and workers are failed to fold their clothes due to lack of time because of classes and work time . From that , we can see clearly the objectives of this machine which is it will help people especially students and those who are living alone in managing their clothes . In addition to that , an Adjustable Automatic Clothes Folding Machine is invented in order to ease our daily work and fasten our job than usual . However , this project requires design skills , research , selection of the best materials that can be used and lastly the mechanism of the machine . The moving mechanism of the folding plate are supported by three servo motor that attached to each of the moving plate to make sure the clothes is properly folded . In order to do that , a right amount of current need to supply to the motor that moves the plates followed by the correct coding about the movement of plates. In conclusion , this automatic clothes folding machine will be greater help for those who need it especially those that are busy with their works and still concerned about their tidiness of their room.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of Study

Folding clothes is of the tedious task in every household. Usually clothes are wash once or twice in a week and lead to piles of clothes to fold each times after drying . Let's say there are six members in a family and each of them using about two shirt and two pants per day . So , the totals clothes that need to be fold are 24 . If the a family wash their clothes once per week then the total clothes that need to be folded is 168 per week . From that , we can see how folding clothes can become as one of the tedious task in our daily life [1] .

However, little did we know , some people also determined to make money by making a folding clothes service as we can see at some of the laundry nearby us . Some of them take charge 30cents per clothes and that is quite expensive . However some of them would not mind about the price as long as their clothes are properly folded. If a person keep and repeatedly use the service , the total services are going to be very much to spend just for folding clothes .

These problem can be reduced or solved by the existence of Adjustable Automatic Clothes Folding Machine (AACFM) which will be made by using stainless steel material and have a lot of functions that can complete the process of folding machine . There are four rectangular plate with their own size that connected to the servo motor that had been well programmed about their movement with a micro-controller Arduino-uno R-13 . An ultrasonic censored also attached on the machine to detect motion or signals to launch the machine to do their work . Other than that , this machine height can be adjusted as a height linear actuator is attached on the table with the maximum addition of height is 250 mm [2] . Lastly this machine only need a plug socket to turn it on and we can start put our cloths on the folding plate before it start it folding process . The machine also can make the work become faster and more time-efficient .