ANALYSIS OF CLASSIFICATION FOR LEFT AND RIGHT COMMAND SIGNAL USING MEL FREQUENCY CEPSTRUMS COEFFICIENT

ILI AQILAH BINTI ISMAIL

Final Year Project Report is submitted in partial fulfilment of the requirements for the degree of
Bachelor of Engineering (Hons) Electronics Engineering

FACULTY OF ELECTRICAL ENGINEERING
UNIVERSITI TEKNOLOGI MARA
MALAYSIA

ABSTRACT

A typical car do have car signal to give a signal when turn or change line on the road. In this work, voice command is analyzed to capture the left or right command. The command is classified using Mel Frequency Cepstrum Coefficient (MFCC) for the navigation system connected to the car lever system. The voice recognition is the input to the car signal system by change the analog signal to digital signal. The findings show that the signal of left and right with different waveform and spectrogram.

ACKNOWLEDGEMENT

I would first like to thank Allah for this big opportunity in my studies. I would like also to extend my gratitude to a number of people whose help was very valuable in this project.

I would like to thank my Supervisor, Dr. Suhana Sulaiman for this meaningful assistance, tireless guidance and patience.

I would also like to thank my parents, lecturers and friends whose literature, advice and encouragement has been priceless also the moral support from them.

TABLE OF CONTENTS

CHAPTER 1 : INTRODUCTION

1.1. Research Background

Blinker are called as heading pointer or course flag work by flickering lights mounted close to one side and right front and back corners of a vehicle. The sign were actuated by the driver to tell the other street client that they need to turn or switch to another lane towards that side. An electric blinker lights was concocted in right on time of 1907. The cutting edge blazing blinker was protected in 1938 and later most real vehicle makers offer this element. Elective frameworks of hand sign were utilized before and stay normal for bikes. Hand sign are likewise now and again utilized when ordinary vehicle lights are breaking down or for more seasoned vehicles without blinker. In many nations, autos must be furnished with side-mounted blinker repeaters to make the turn sign unmistakable along the side as opposed to simply to the front and back of the vehicle.

1.2. Problem Statement

Various types of accident can occur simply because a driver did not use their turn signal. For example, a vehicle waiting to turn in front of traffic but did not turn on the turn signal, this could be a dangerous that can cause crash. When a car changes lanes on the road, other drivers need to be aware as if a driver give a turn signals, other drivers can be surely give a space for the car. Drivers who fail to use turn signal while traveling at a high rate of speed could end up accidents. Although there are many studies regarding the impact of the failure of driver to use turn signals, the study still indicates that a number of vehicle crashes are caused by the failure to use turn signals or lack of turn signal.

Using turn signals correctly is crucial for avoiding accidents. However, remembering to shut off turn signals is another way that one can avoid accidents. Sometimes, accidents are caused because drivers leave their turn signal on for an extended period of time. For example, if a driver is waiting for an opportune time to pull out onto a street, they may see a car that has left their turn signal on from a previous turn coming towards the. The driver waiting to pull out may misjudge the