

Universiti Teknologi MARA (Perak)

Malay Speech Recognition to Determine Emotion Using Fuzzy Logic

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ABSTRACT

Emotion classification is something interesting, but to develop a system that can classify the type of emotion in speech is a difficult process. This is because it becomes complicated when people try to determine what type of emotions without seeing the facial expression. This project focuses on developing the prototype that can classify the type of emotion just by listening to the voice recorded only. The significant of this project is it can use in many industries such as operator service, counselor and lawyer. The objective of this project is to determine the type of emotion in recorded speech and to develop a system that can classify what type of emotion using fuzzy logic technique. To ensure the ability of this project, the testing process will be conducted using 50 samples of recorded speech. This project only covers three types of emotion that are happy, sad and angry. The classifying process is using average frequency of each recorded speech. This project also limited to Malay language and female voice only. As a conclusion, the prototype is able to determine the type of emotion in recorded speech using fuzzy logic technique.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter describes about the overview and explains the details of this research. It starts with the introduction. Then, it is followed by the problem statement, objectives of the project, the scope of the project, the significance of the project and ends with the conclusion of the research.

1.1 Project Background

“Emotions are complex experiences and to express them, we use a great variety of terms, besides gestures and attitudes” (Marteles, 1998). Furthermore, emotions are very personal for some people as it is difficult to be defined or recognized and it becomes more difficult without the existence of facial expression as an aid. For example, in a call center, the operators need to identify the caller emotions without having to see their faces, solely just by hearing the caller voices and what they have said through the telephone.

This project aims is to help operators in the call center determine the emotion of the callers. Basically, each operator need to serve many calls per day as their daily routine. However, as human beings, undoubtedly operators also will reach their limits thus unable to meet the customer needs. This is due to the fact that each person has a different type of behaviors that can produce many types of