UNIVERSITI TEKNOLOGI MARA

EVALUATION OF INTONATION FEATURES ON EMPHASIZED MALAY WORDS

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ABSTRACT

Detection of emphasized has become one active research in speech processing. Nowadays, in automatic speech recognition, listeners not only want to be able automatically understand which words the speakers have said but also how the speakers deliver the speech. This paper presents detection of emphasis in Malay sentences. Thus, the purpose of this research is consisting, to construct emphasized Malay speech, to evaluate pitch and intensity features on Malay words and lastly to classify the Malay words using intonation features. First step to construct emphasized Malay speech is by listening to 96 sentences and 314 words by 2 different speakers. In this step, user hear the speech and used the hand labelling method discuss in chapter 2. User listened to the speech audio and mark the words that the user finds the speaker voice is high. If the voice of speaker is high, user classified the word as emphasized words. This step is to determine the emphasized and non-emphasized words. All the features of emphasized words detect by user is extracted. After detection of emphasized and non-emphasized words for speaker1 and speaker2, intensity and pitch features need to be evaluated. Intensity and pitch features that need to be evaluated are minimum value of pitch and intensity, maximum value of pitch and intensity and mean value of pitch and intensity. In this research, all 314 words from 2 different male speakers' speeches are clustered manually based on features of intensity and pitch pattern. The pattern of the features such as intensity and pitch are observed and clustered to find out how many patterns can be identified from all the words. Result from the intensity and pitch features can classify Malay phrases. Activities in this section are, for testing part, 314 words from 2 different speakers are evaluated by using clustering method. WEKA is a set of machine learning algorithm for data mining task. The data are clustered to determine emphasized and non-emphasized words. From the research done shows that he highest perentage in detecting emphasized words in Malay words is by combination of all features such as intensity and pitch features.

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CHAPTER 1

INTRODUCTION

1.1   RESEARCH BACKGROUND

Detection of emphasized has become one active research in speech processing. Nowadays, in automatic speech recognition, listeners not only want to be able automatically understand which words the speakers have said but also how the speakers deliver the speech (Lyndon & Daneil, 2013).

Previous literature stated that, emphasized is to make something important, or stress it, in speech, it is important for the listeners to know which words or which segment that the speaker emphasized to understand the important things that the speaker want to deliver. The detection of emphasized has been researched for many years. At first, the aimed for emphasized detection is to group speech recordings or summarize spoken data by classifying the emphasized (Chen & Withgott, 1992).

It has been shown that emotional perception is strongly influenced by context of the speech (Cauldwell, 2000). In some cases, context has been injected into the hand-labeling process by using labelers who personally knew the meeting participants, and then were familiar with their speaking speech patterns. In labeling approach, utterances into context for the labelers by having the labelers mark ordered utterances from the same meeting. This can make the labelers to hear each utterance in the context of the utterances that preceded it. The labelers are given both recording and a transcript of the meeting to implement this labeling approach. The labelers listened to the meeting recording and followed along with the transcript, marking each utterance of the speech.

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