DEVELOPING A VOICE RECOGNITION FILIPINO LEARNING GAME FOR KIDS

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DEVELOPING A VOICE RECOGNITION FILIPINO LEARNING GAME FOR KIDS

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ABSTRACT

The Filipino Speech Recognition Game study discusses the application of speech recognition as educational tool for kids. This project aims to help the younger generation in learning Filipino language. This educational project was developed using C# programming language with the aid of Windows Desktop Speech Technology software or more known as Windows Speech Recognition engine and libraries like System.Speech.Recognition. The project was also designed in the interface of XAML. With the help of some pictures, appropriate layout and interactive game mode, it is hoped that learning the Filipino language will be more enjoyable for young ones.

Keywords:

Speech Recognition, Filipino Language, kids, Game, C#, XAML, Windows Speech Recognition

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Over the years, there had been a growing concern for the younger generation since they are having a hard time in learning the Filipino language. Kids nowadays are really having difficulties on speaking and reading Filipino words and literatures well. They tend to mixed various languages, such as English and Bisaya into Filipino. Because of the advancement of technology the English language is now prevailing over the national language. In order to be educated on his/her own language, one must learn during his/her childhood years. The next generation will be able to speak, read and comprehend the Filipino language well if they will be taught from the basic.

The younger ones of today's generation is more advance than before and they are now with technology. These days, computer games are not used only for entertainment but also for educational purposes as well. Yet educational videos and other games is not enough since there is no two way communication. So, to let them learn the Filipino Language while keeping their interest, the researchers propose an educational and Filipino based game for the kids that will be capable of communication to the small ones with the aid of voice recognition. The game is intended not just to educate kids in a fun and interactive way but also promote Filipino language. This game will help the next generations to come.

1.2 Technology Application Context

The present study seeks to answer the following general problem:

How to develop a voice recognition Filipino learning game for kids?

Specifically, it seeks to answer the following compelling problem:

- How will the kids learn Filipino in fun and interesting way?
- How will the kids improve their vocabulary with Filipino words?
- What is voice recognition? What is its relation to the study?

1.3 Objectives of the Study

The general objective of this study is to develop an educational game using speech recognition tools and other related technologies. This game application is intended to help the younger generation in speaking, reading, comprehending Filipino words

The specific objectives are:

- To improve the Filipino words vocabulary of kids.
- To use Windows Speech Recognition to train the system to recognize tagalong words.
- To use C# as the programming language for the development of the application.
- To use the Speech Recognition libraries and classes in the development of the project.

- To use Window Presentation Foundation and XAML to create a suitable graphical interface that would be suitable for kids.

1.4 Significance of the Study

The significance of the study lies in the fact that the younger generations of Filipinos today desperately needs to improve their knowledge of the Filipino language. The study sheds light on teaching the kids to speak and read in Filipino words.

The researcher also intends to help the next generation which to be educated in a fun and exciting manner. Moreover, this study addressed itself to:

- Kids that they may learn while having fun.
- Parents that they may give their children learning.
- Filipinos that they may preserve and expand their knowledge of their own language.
- The field of Game Developing that it will integrate speech recognition as a tool in different learning games.

1.5 Scope and Limitations of the Study

The study will be focusing on reading some Filipino words that are applicable for kids. To accomplish this study, a game must be created in order to get the attention and interest of young ones. Along the game, the application will be listening to the response of the kids via voice recognition. The user must pronounce the words

clearly in order to accurately interpret the words spoken as inputs to the system. The game has two way communications from the user to the application and vice versa.

This study is limited for the Filipino people since the Filipino language will be used. Foreigners who are interested in learning the Filipino language are applicable as users. The game is intended for ages 5 – 7 years old that are intellectual in technologies. The voice recognition of the game is limited to work in times when users are prompt and not the whole time.

1.6 Definition of Terms

Extensible Application Markup Language (XAML) – is an XML-based markup language developed by Microsoft. The language behind the visual presentation of an application is XAML, which you develop in Microsoft Expression Blend.

Graphical User Interface (GUI) – it is a type of user-interface that allows users to interact with electronic devices using images rather than text commands.

Homograph – words that has same spelling but has different pronunciation and meanings.

Speech Recognition (SR) – it is the capability of a program to recognize words and phrases in spoken language and convert it into a machine-readable format. The person's speech is analyzed the persons specific voice in the system and use it to fine tune the recognition.

Phoneme – It is the smallest contrastive unit in the sound system of a specific language.

Windows Speech Recognition (WSR) – is a speech recognition application which is included in Windows Vista and more recently in Windows 7.

Windows Presentation Foundation (WPF) – is a computer-software graphical subsystem for rendering user interfaces in Windows-based Application. It employs XAML, an XML-based language, to define and link various User Interface elements.