

International Journal of Computer Science and Mobile Computing

A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

IMPACT FACTOR: 6.017



IJCSMC, Vol. 5, Issue. 12, December 2016, pg.197 – 199

VOICE BASED EXAMINATION SYSTEM

Prof. Uday Patkar¹

Head of Department, Computer Engineering Department, Bharati Vidyapeeth College of Engineering, India

Srishty Choudhary², Saurabh Marne³, Harshal Arbat⁴

^{2,3,4}Computer Engineering Department, Bharati Vidyapeeth College of Engineering, India

Abstract: - Today in the modern era of technology the world is more inherently moving towards the technology of automation where there is no intervention of human beings in carrying out the task of computing, hence we are focusing to develop such a project which will be providing automation in indifferent way. In this we will develop such a system in which anyone interested to check his/her knowledge can answer questions just by speaking and our system will efficiently judge those answers and grade that person accordingly. Many extravagant features of this project include automation concept together with the idea of sharing that result with authenticated higher authorities accompanied with achieving a situation where the focus will be on the accent and content whatever the person is delivering not on the illusion that person is just attempting the questions. Hence more priority will be given to knowledge and the facts.

Keywords: - Key Generation, Reverse circle cipher, Fuzzy logic.

I. Introduction

With the rapid development of information technology and educational evaluation methods, the disadvantages of traditional examination become clear. On the other hand, online examination system developed fast for convenience, efficiency and economy. But that doesn't mean it is perfect. We are enjoying the convenience of online examination system. At the same time, the negative factors existed in traditional examination have been migrated to the online examination. For solving the above questions, this article provides two more efficient solutions. Firstly, online examination is different from traditional examination. The online examination paper doesn't need to be printed. In other words, as online examination, it is possible to generate examination paper automatically. We can try to take measures of automatic generating examination paper to make examination paper. That is to say, on the premise of the same difficulty, type and quantity of the question, each examiner can get different examination paper, and all the examination papers are automatically made after the examination starts. Exactly, if your examination paper is different from others, in the limited how can you copy answer from them? It can not only eliminate the possibility of cheat but also prevent leakage of the examination paper in advance.

But along with this migration of educational evaluation methods, and coming towards the concept of online examination system, we are combining the online examination system with voice recognition system. The voice will be so used to evaluate the answers. Not only this using key generation algorithm and reverse cycle cipher algorithm we will be ensuring the security measures thereby encrypting and decrypting question paper and answers also.

II. Literature Overview

I. Voice Recognition system

Voice Recognition is a fascinating Field spanning several areas of computer science and mathematics. Reliable speech recognition is a hard problem, requiring a combination of many complex techniques however modern method has been able to achieve an impressive degree of accuracy. Speech recognition is the process by which a computer (or other type of machine) identifies spoken words. Basically, it means talking to your computer, and having it correctly recognized what you are saying. Voice or speech recognition is the ability of a machine or program to receive and interpret dictation, or to understand and carry out spoken commands. In the proposed system only voice will be interaction tool to a user with the system for registration and verification.

Many systems which exist till date are as follows:

A. C Rater

C rater is educational testing service which is technique used for the content scoring. This content scoring is based on model building which makes various answer model for candidate's short answer. ETS (Education Testing Service) used for checking short answer of candidate in range of 100 words approximately. It uses analytical approach & rubrics item which specify correct & important terms which should be present in candidate's answer. The problem of different answer structure of candidate is solved using c-rater. It saves 0-12 hour work of humans.

Steps of c-rater model are:

1. Model building.
2. C Rater automatically processes.
3. Maintaining algorithm gold map.
4. Apply student answer.

Task performs by c-rater:

1. Processes for spelling correction.
2. Part of speech tagging & parsing.
3. Parse tree passed through feature extractor.

B. Automark

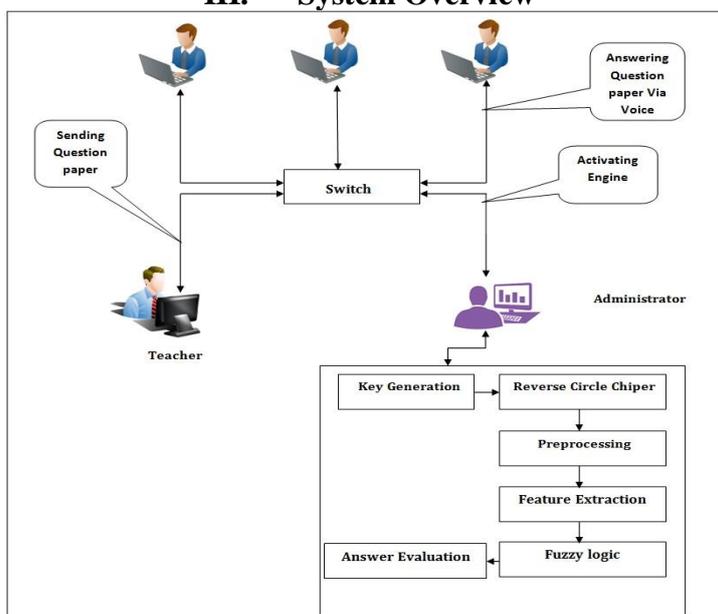
Automark system is developed to provide short answer marking. The system processes a number of modules specifically worked for finding errors in typing, spelling, syntax and semantics. Automark looks for specific content within answers, the content being specified in the form of a number of marking scheme designed. Each structure represents all possible valid or an invalid answer. Using an offline custom written configuration interface, templates are developed. The Automark system was used for marking the spelling, semantic errors and syntax in answer text. Every marking goes through various stages.

Stage 1: In this stage the answer text is preprocessed to standardize the input with respect to punctuation and spellings.

Stage 2: In the second stage syntax analyzer analyzes the main syntactic of the input text.

Stage 3: This is the last stage where pattern matching module finds all the possible matches for marking.

III. System Overview



The system overview is considered to be the foremost important concept that very well describes each and every poth hole and nick of the project. In our system overview, we get to know many points about overall functioning of the system. Here the Admin is responsible for handling the engine. He is the one who is responsible for activating the engine of our system. Then second important role is played by teacher, he/she will login in to our system using his/her credentials then question paper will be generated by them. As teacher knows very well regarding which question is to be asked. Prior answer to those questions will be stored in our database beforehand.

Now the lead role is played by the students. They will be using our system. Students will login in to system and corresponding date and time will be used by key generation algorithm to generate the unique keys respectively. The answers given by them will be in the form of voice and using some inbuilt API's we will be converting the answers from voice form to text that is in String format. Then the answers will be matched with those which are already stored in our database. Matching the answer will involve feature extraction concept in which we will be looking for the numerical data or the noun. Based on these evaluation criteria answers given by the students will be evaluated by our system. Use of fuzzy logic and other algorithm like reverse circle cipher is very crucial for the successful system.

IV. Conclusion

The proposed system is developed to conduct an Online Examination using voice which will be helpful for people who don't want to use keyboard for interaction with the system. The proposed method will help for voice recognition where we take voice as input through microphone and then register for online examination using the concept of Key generation.

References

- [1] C. Leacock and M. Chodorow, "C-Rater: Automated Scoring of Short-Answer Question," *Computers and the Humanities*, vol. 37, no. 4, pp. 389-405, 2003.
- [2] Mahesh T R, Suresh M B, M Vinayababu "Text Mining: Advancements, Challenges and Future Directions" *International Journal of Reviews in Computing* 2009-2010.
- [3] Vishal Gupta, Gurpreet S. Lehal "A Survey of Text Mining Techniques and Applications" *Journal of Emerging Technologies in Web Intelligence*, volume1, no. 1, August 2009.
- [4] Salvatore Valenti, Francesca Neri and Alessandro Cucchiarelli,"An Overview of Current Research on Automate Essay Grading" *DIIGAUniversita 'Politecnicadelle Marche, Ancona, Italy. Journal of Information Technology Education* Volume 2, 2003.
- [5] Nurzhan Nurseitov, Michael Paulson, Randall Reynolds, Clemente Izurieta "Comparison of JSON and XML Data Interchange Formats", A Case Study Department of Computer Science Montana State University – Bozeman, Montana, 59715, USA.
- [6] Anil K. Jain, Arun Ross, Salil Prabhakar "An Introduction to Biometric Recognition" *IEEE Transactions on circuit and systems for video technology*, Vol 14, No. 1, January 2004.

BIOGRAPHY

Professor Uday Patkar is a Head of Computer Department. He has a huge experience in software designing and modeling.

Srishty Choudhary is the Student of final year Computer with a deep interest in the field of Artificial intelligence, voice based systems dealing with automation part and Robotics.

Saurabh Marne is the Student of final year Computer with a deep interest in the field of wearable computing and pervasive computing.

Harshal Arbat is the Student of final year Computer with a deep interest in the field of networking.