

# Automated Descriptive Answer Checker Using Artificial Intelligence.

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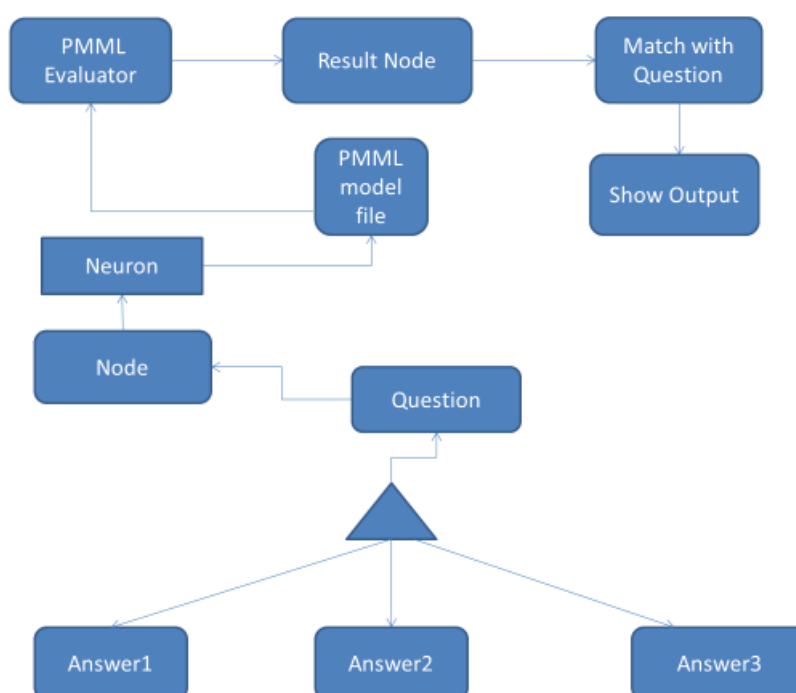
**Abstract:** We present an “Automated Descriptive answer checker application using Artificial Intelligence”. Our system mainly focuses on correcting the answer paper based on predefined data set using neural network and PMML language which will ease our decision-making task. Our proposed system works on two main processes the one is PMML model file and second is evaluating the model file using neural evaluator. The system works in reverse manner where answers is given to system and question is returned as resulting node. Now this result node is compared with our question and if question matches then we assume it as correct answer. The main idea behind going in reverse manner is because one question can have multiple similar answers. This system works on real time basis where subjective answers are immediately compared with given questions and result is shown to student.

**Keywords - PMML, Artificial Intelligence, neutral network, neutral evaluator, PMML model file.**

## I. INTRODUCTION

In previous method the answer checking process was done manually, which had merits as well as demerits. The demerits may be occurred when there is any misconception or error in human correction due to lack of many reasons. To overcome the problem, we are making an Automated Descriptive answer checker application using Artificial INTELLIGENCE. THE main idea behind this project is to eliminate the overhead of manually correcting answer papers. The manual correction of answer paper takes more time and also more man power. We can eliminate this drawback using our system. Our system mainly focuses on correcting the answer paper based on predefined data set using neural network and PMML language which will ease our decision-making task. Our proposed system works on two main processes the one is PMML model file and second is EVALUATING the model file using neural evaluator. The system works in reverse manner where answers is given to system and question is returned as resulting node. Now this result node is compared with our question and if question matches then we assume it as correct answer. The main idea behind going in reverse manner is because one question can have multiple similar answers. This system works on real time basis where subjective answers are immediately compared with given questions and result is shown to STUDENT. EXAMINERS get bored by checking many answer sheets, hence the system reduces their workload by automating the manual checking process accurately. As well as system calculates the score and provides results instantly and removes human errors that commonly occur during manual checking, thus the system excludes human efforts and saves time and resources.

## II. DIAGRAM:



**2.1 Existing Systems: -**

1. Online subjective answer checker: -

The system will let students give exam online, calculate the results automatically as well as produce a record for the administrator. The paper will focus on correcting on the basis of certain keywords that every answer will contain and give marks to the students according to the presence of the keywords in the answers.

2. AI answer verifier: -

The standard answer is stored in the database with the description meaning & keywords. Then it will evaluate each answer by matching the keywords or the key concepts as well as its synonyms with the standard answer. It will also check the grammar & spellings of the words.

**III. RELATED WORK: -**

**Merien Mathew, Ankit Chavan, Siddharth Baikar [1]**

Authors are pleased to present “Online Subjective Answer Checker” that will ease out the process of checking of answer papers with accuracy. The system will let students give exam online; calculate the results automatically as well as produce a record for the administrator. The paper will focus on correcting on the basis of certain keywords that every answer will contain and give marks to the students according to the presence of the keywords in the answers. This system will help reduce all human errors thereby making the system more efficient.

**Gunjal M.S., Sanap K.N., Sable R.G., Nannaware P.S., Ghuge R.B. [2]**

Authors has proposed an automating the task of scoring subjective answer is considered. The goal is to assign score which are comparable to those of human score by coupling AI technologies. In this process involves many image level operations i.e. removal of preprinted matter, extraction and segmentation of words. Scoring is based on machine learning of parameter and natural language processing. System checks answer and score as good as human being. Keywords: Data-mining, stop word Selection, Text Classification, Stemming Algorithm and Stripping Algorithm.

**Prof. Dhanshri Patil, Abhijeet Chopade, Pankaj Bhambure, Sanket Deshmukh [3]**

Authors though computers are considered as machines, they are expected to give answers to questions in normal English language, just the way human beings can do. To train a computer to answer English language questions is an interesting and challenging problem. The automatic answering systems are classified under two categories: open domain systems and close domain systems. In this paper an answering scheme is proposed that combines close domain and open domain system. The question answering system for closed domain deals with questions under specific domain. Answers to questions from close domain cannot be searched using a search engine. During a close domain, answers to questions are not alive in the public area and so they cannot be search using a search engine. Hence, the answers to such questions are maintained in a database by the domain expert. During retrieval of answers, the best matched answer searched from database is returned to the user. To perform this matching a template matching technique is used. Open domain question answering system deals with all questions covering all domains. These systems can rely search engines to find the required answer.

**Ashutosh Shinde, CNishit Nirbhavane, Sharda Mahajan, Vikas Katkar, Supriya Chaudhary [4]**

Examinations have always been part of every educational, non-educational organization. Examinations can either descriptive or objective or both. Every examination needs evaluation. Most of the competitive examinations are objective in nature. They are conducted on machines evaluated on the same. These systems or any other such system are more advantages in terms of saving resources. However, it has observed that these systems can contain only multiple-choice questions and there is no provision to extend these systems to subjective questions. There are few problems due to which these systems cannot be used in board examinations, university examinations where students write subjective answer so there is need for software system which will help in reducing the usage of resources. for countries like India, ever-growing population and poor infrastructure hampers quality education. It can be imagined that the amount of pressure that is held on education system and teachers to evaluate the number of answer copies however, going forward, India will need to be focus more on quality.

**IV. COMPARATIVE ANALYSIS**

Sr no	Project title	PMML and neural network used	Keyword search technique used	Voting technique used	Template matching technique used	Description

1	AI answer verifier	No	yes	No	No	The standard answer is store database with the description meaning & keywords. Then will evaluate each answer by matching the keywords or the key concepts as well as its synonyms with the standard answer.
2	Online subjective answer checker	No	yes	No	No	The system will let students give exam online, calculate the results automatically as well as produce a record for the administrator. The paper will focus on correcting on the basis of certain keywords that every answer.
3	Automatic answer sheet checker	No	No	No	Yes	In this process involves many image level operations i.e. removal of pre-printed matter, extraction and segmentation of words.
4	Automatic Answer validation System on English Language	No	No	Yes	No	The results obtained from the four answer validation modules are integrated using a voting technique.
5	Proposed System	yes	No	No	No	Correcting the answer paper based on predefined data set using neural network and PMML language which will ease our decision-making task.

## V. METHODOLOGY

We are using neural network in our application. Neural networks, with their remarkable ability to derive meaning from complicated or imprecise data, can be used to extract patterns and detect trends that are too complex to be noticed by either humans or other computer techniques. A trained neural network can be thought of as an "expert" in the category of information it has been given to analyze.

## VI. PROPOSED SYSTEM

It is based on the principle of modelling language, which is in structured data format as compared to other existing system is based on unstructured data format. In existing system raw data is used, where it is time consuming for data preparation, but in our proposed system structured data is used, where it is less time consuming for data preparation.

## VII. CONCLUSION

The project entitled "Automated descriptive answer checker using artificial intelligence". This software is built to check the subjective answer. Our system mainly focuses on correcting the answer paper based on predefined data set using neural network and PMML language which will ease our decision-making task.

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