Subjective Answer Evaluation using AI

Pragyan Yadav

Introduction

Subjective Written Assessment plays a central role in any educational process because it is a common way to evaluate the student's knowledge regarding the concepts related to learning objectives. Teachers a spend lot of time in correcting answer sheets. If this task can be done by an AI, teachers can focus more on teaching and improving their teaching concepts.

The standard answer and the answer given by the student will be taken and both the answers will be compared. Marks would be given on the similarities in the words.

There we also be a grammar and spelling check.

There will also be an option for the teacher to look for important keywords in the document.

4W of Problem Scoping

Who is affected by the problem?	Education system
Why is it a problem?	A major part of a teacher's time is spent in evaluating answer sheets which can be utilized by them to focus more on teaching and teaching methods.
Where is the problem?	In educational institutions.
What is the problem?	Teachers spend a lot of time in checking answer sheets of exams. They can also have mistaken and can be biased while evaluating answer sheets.

Proposed Approach

I present a Siamese adaptation of the Long Short-Term Memory (LSTM) network for labeled data comprised of pairs of variable-length sequences.

My model is applied to assess semantic similarity between sentences with carefully handcrafted features and recently proposed neural network systems of greater complexity. For these applications, I provide word embedding vectors supplemented with synonymic information to the LSTMs, which use a fixed size vector to encode the underlying meaning expressed in a sentence (irrespective of the wording/syntax).

After conversion of sentences to vector we find the cosine similarity between the vectors.

Neural Network Architecture