

Idea Name: AutoCorrect

Team Name: AutoCorrect

Abstract:

Too many papers!

Correction of papers is a very strenuous and physically tiring task. It requires constant concentration and a clear conscience and fair hand to mark answers and award a candidate their deserved marks. During Examinations, over thousands of papers are sometimes corrected, with some teachers putting in the effort to correct almost a hundred papers every day. This ardent effort sometimes leads to mistakes creeping in, or a non-standardised method of evaluation, wherein benefits may be given to a student, based on his scores in previous answers. We need to find a way to not only reduce the pressure on teachers during exam sessions but also speed up the process of correction.

Why AutoCorrect?

The future lies in automation and computers aided with machine learning can solve this very issue quite comfortably. If answer script evaluation can be automated, it will not only lead to a stricter and more standardised as well as a fair method of correction but will also lead to lesser instances of mistakes, or any form of malpractice that is possible on the teacher's end. It will also help increase the rate of paper correction and lessen the burden teachers have during the exam season. Although this method might not completely replace a teacher's correction, it will certainly go a long way ahead to digitalise the entire process and may even be a possibility soon.

How does it work?

The core of this application lies in Image Recognition and Natural Language Processing (NLP). A database for every question paper is stored which contains each question's model answer, stored along with its comparison model which contains key-value pairs of keywords of the answer mapped to sentences containing these values. This is performed beforehand to construct a database to make this process of correction faster.

Technology Stack

- Python3
- NLP and Image Processing
- nltk, spaCy and gensim
- Word Embedding model
- Keras & Tensorflow
- OpenCV
- Glob
- pytesseract