HANDWRITTEN TEXT TO DIGITAL TEXT CONVERSION

USING VARIOUS DEEP LEARNING MODELS

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ABSTRACT:

The capacity to recognize and understand legible handwritten input from sources including paper documents, touch screens, photo graphs, etc. is known as handwriting detection. Recognition of handwritten text is one type of pattern recognition. The classification of data based on previously acquired knowledge or on statistical data extrapolated from patterns and/or their representation is known as pattern recognition. Handwriting recognition is the process of turning a language represented by graphical marks in space into its symbolic equivalent. Each script has a collection of symbols, also known as characters or letters, in which the shapes vary. Identifying input characters or images accurately is the aim of handwriting, which is subsequently examined by numerous automated process systems. This technique will be used to identify writings in various formats. The evolution of handwriting has led to the appearance of many different types of handwritten characters, including digits, numerals, cursive writing, symbols, and scripts in both English and other languages. Several applications where it is important to handle huge volumes of handwritten data, such as the interpretation of amounts on bank checks, document analysis, and signature verification, can benefit greatly from the automatic recognition of handwritten text. In order to make processing documents easier, a computer that can read documents or data is required.

RELATED WORKS:

OCR:

OCR distinguishes between characters based on shape and can recognize them. It serves as an alpha-numeric character reader for pre-printed papers. The performance for the printed text is done well, whilst compared to the handwritten text. OCR technology achieves the accuracy greater than 99% for the typed characters in the input images with high quality. But it provides less accuracy when there are different types of handwritings, differences in spaces and irregularities of handwriting. Thus, the accuracy that is provided by the OCR systems for handwritten characters is less when compared to the accuracy that is provided by the OCR systems for typed characters. OCR system does not have as many tools to operate the handwriting recognition. As the handwritings differ from person to person, traditional OCR system cannot recognize everyone's handwriting. To recognize all the different handwritings successfully complex deep learning algorithms are to be used. The recognition of handwritten

text highly depends on Neural Networks. By using these algorithms, the performance of handwriting recognition tools can be increased.

EXECUTION PLAN:

1. Deciding the project title
2. Reviewing the research papers related to the project
3. Project proposal
4. Deciding on algo's to work on
5. Collecting different types of datasets.
6. Allocating and diving the project works for everyone as a group of 3
7. Finally, working on results, and documentation.
8. To complete the project in-time.

EXPECTING TO LEARN/CONTRIBUTE:

To learn, and draw more insights from different research papers. Investing more time to work on different algorithms till the satisfied result is obtained.

EVALUATING RESULTS:

Based on the accuracy, and working of the model.