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ENHANCE APPROACH FOR AUTO CAPTION GENERATION ON DIFFERENT NEWS IMAGES DATASET USING FUZZY LOGIC

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ABSTRACT
These times, whenever retrieving images from the search Engines that retrieves images without analysing their include restrain, simply by matching user inquires against the image's file name and format, user comment the tags, captions, and, generally, text surrounding the image. Also the retrieved image contains any textual data along with the images. Our announced the task of automatic caption generation for news images. The task fuses insights from computer vision and natural language processing and holds promise for various multimedia applications, such as image retrieval, development of tools supporting news media management, and for individuals with visual impairment. It is possible to learn a caption generation model from weakly labelled data without costly manual involvement. Instead of manually creating annotations, image captions are treated as labels for the image. Although the caption words are admittedly noisy compared to traditional human-created keywords, we show that they can be used to learn the correspondences between visual and textual modalities, and also serve as a gold standard for the caption generation task. We have presented extractive and abstractive caption generation models. A key aspect of our approach is to allow both the visual and textual modalities to influence the generation task. We proposed fuzzy rules for generating caption of the new image.

KEYWORDS: Caption generation, Stop word removal, Stemming, Key Extraction Algorithm, Headline Pattern Algorithm, News Images, Fuzzy logic.

INTRODUCTION
In a data mining, Text mining is a new area of computer science which fosters strong con- sections with natural language processing, data mining, machine learning, in- formation retrieval and knowledge management. Text mining seeks to extract useful information from unstructured textual data through the identification and exploration of interesting patterns. Lots of search engines available on the web retrieve images without analysing their content, simply by matching user inquires against collocated textual set of data. For example metadata, user-comment tags, captions, and, generally, text surrounding the image. But this has major disadvantages; they challenge the applicability of search engines. The Extraction method for summarization involves identifying the features such as sentence length, sentence location, term frequency, number of words occurring in title, number of proper nouns, number of numerical data and thematic word. Our approaches uses feature fusion technique in order to decide which features are actually useful out of the available ones. The most recent quaternary periods   have witnessed an unprecedented growth in the multiple of digital lots of data available on the Internet. Flicker, one of the best known photos sharing websites, hosts more than three very large numbers of images, with approximately 2.5 million images being uploaded every one day. Many on-line news sites like Yahoo!, and BBC publish images with their stories and even provide photo feeds related to current events. Browsing and finding pictures in large-scale and heterogeneous collections is an important problem

that has attracted much interest within information retrieval. Many of the search engines deployed on the web retrieve images without analysing their content, simply by matching user queries against collocated textual information. Our focus on captioned images embedded in news dataset, and makes use of both models of content selection and surface realization from data and thus avoid expensive manual comment. For example, an image commented with the words blue, sky, car could represent a blue car or a blue sky, whereas the caption "car slang to go away opposition the bright clear blue" would make the relations between the words outspoken Also, image descriptions need to be abrupt, focusing on the most important depicted objects or events. A method that generates such descriptions automatically could also assist journalists in creating being describe for the images associated with their articles or in finding images that appropriately illustrate their text. Also the linking of images with textual descriptions would facilitate the retrieval and management of multimedia data .It could also assist journalists in creating descriptions for the images associated with their articles or in finding images that appropriately illustrate their text.

RELATED WORK
All methods attempt to learn the correlation between image features and words from examples of images manually annotated with keywords. They are typically developed and valuated on the Corel database, a collection of stock photographs, divided into themes (e.g., tigers, sunsets) each of which are associated with keywords (e.g., sun, sea) that are in turn considered appropriate descriptors for all images belonging to the same theme1. Automatic Image Description Generation

This application follows two stage architecture. The images first analysed using image processing techniques into an abstract representation, which is then rendered into a natural language description with a text generation engine. A common theme across different models is domain specificity, the use of hand-labeled data indexed by image signature (e.g. Color and texture), and reliance on background ontological information. Author in this paper focus on [1] concerned with the task of automatically genera captions for images, which is important for many image related applications. Our model learns to create captions from publicly available dataset that has not been explicitly labelled for our task. The abstractive surface realization model generates captions that are favourable to human generated captions. Author in this paper [2] tackle the problem of automatic caption generation for news images. Our approach leverages the vast resource of pictures available on the web and the fact that many of them are captioned. Inspired by recent work in summarization, we propose extractive and abstractive caption generation models. They both operate over the output of a probabilistic image annotation model that pre-processes the pictures and suggests keywords to describe their content. Experimental results show that an abstractive model defined over phrases is superior to extractive methods.

PROPOSED WORK
Automatic key phrase extraction can be categorized into supervised learning approaches, unsupervised learning approaches, and non-learning approaches. It can also be treated as either a classification problem or a ranking problem. Difference key phrase extraction techniques provided by different authors may target different sub-processes of the entire key phrase extraction process. A complete key phrase extraction process can be generally divided into four sub processes: pre-processing, candidate selection, weighting and classification/ranking, and construct final output list of key phrases. In the above flowchart shown the complete scenario of this paper where the figure1, Automatic key phrase extraction can be categorized into supervised learning approaches, unsupervised learning approaches, and non-learning approaches. It can also be treated as either a classification problem or a ranking problem. Difference key phrase extraction techniques provided by different authors may target different sub-processes of the entire key phrase extraction process . A complete key phrase extraction process can be generally divided into four sub processes: pre-processing, candidate selection, weighting and classification/ranking, and construct final output list of key phrases. Kea's extraction algorithm has two stages: Training: create a model for identifying keyphrases, using training documents where the author's keyphrases are known We have investigated several looking for noun phrases, but we have found that the following rules are both simple and effective:
1. Candidate phrases are limited to a certain maximum length (usually three words).
2. Candidate phrases cannot be proper names (i.e. single words that only ever appear with an

initial capital). Candidate phrases cannot begin or end with stopword. The stopword list contains 425 words in nine syntactic classes (conjunctions, articles, particles, prepositions, pronouns, anomalous verbs, adjectives, and adverbs). For most of these classes, all the words listed
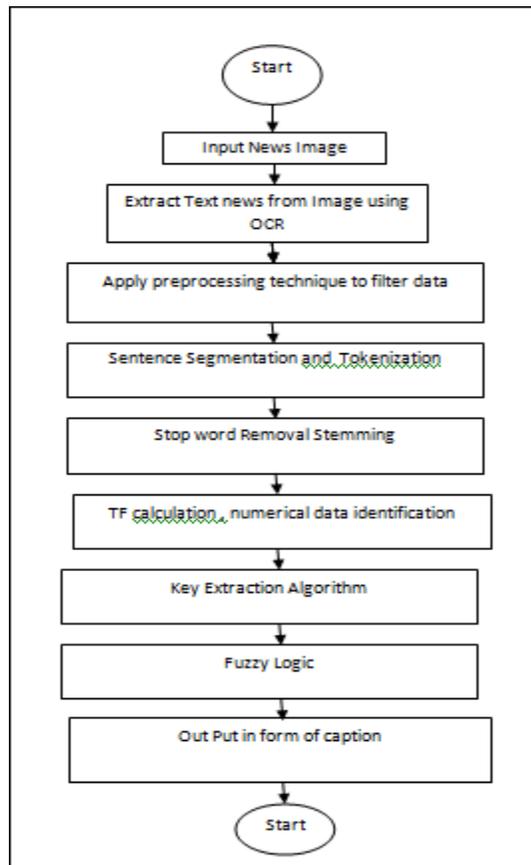
Figure1: Data Flow Dig. For Caption Generation

In our proposed method uses fuzzy rules and fuzzy set for selecting sentences based on their features. Fuzzy logic technique in the form of approximate reasoning provides decision support and expert system with powerful reasoning capabilities. The permissiveness of fuzziness in human thought processes suggests that much of the logic behind human reasoning is not only a traditional two-values or multi-valued logic, but also logic with fuzzy truths, fuzzy connectives, and fuzzy rules of inference. Fuzzy set proposed by Zadeh is a mathematical tool for dealing with uncertainty, imprecision, vagueness and ambiguity. Fuzzy logic in in caption generation needs more investigation. A few studies were done in this area, Witte and Bergler presented a fuzzy-theory based approach to co-reference resolution and its application to text summarization. Automatic determination of co-reference between noun phrases is fraught with uncertainty.

The feature extraction:
The feature extraction techniques are used to obtain the important sentences in the text. In feature extraction technique some of the features have more importance and some have less so they should have balance weight in computations and we use fuzzy logic to solve this problem by defining membership function for each feature. The process is outlined . The input stream is split into tokens (sequences of letters, digits and internal periods), and then several modifications are made: characters are deleted, as Phrase identification Kea then considers all the subsequences in each line and determines which of these are suitable candidate phrases. We have investigated several looking for noun phrases, an on-line dictionary were added to the list. However, for adjectives and adverbs, we introduced several subclasses, and words from the subclasses were added only if they overlapped the sixty most common words in the Brown corpus (Kucera and Francis, 1967).

Figure 2: News Text Images using for generation the caption

Graphical User Interface

Figure 3: GUI for Caption Generation

In caption generation first GUI screen to Caption generation. It will take a firstly to select news image for generate the text for an image.
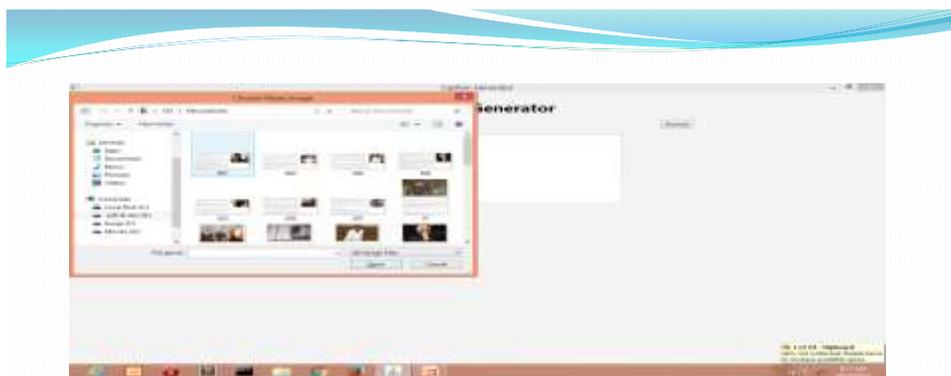
Figure 4: Select the images for the user

Now, the firstly we have to select one image to the extract text. We have select the image for the database.

Figure 5:Apply OCR for extracting Text

The image can be selected then apply the OCR to text can be extract here the text can helps to caption generator for related news images.

Figure 6: Text Extraction for news text image

Now, we can apply the OCR tools for generate the text .This process only text can be extract caption can't generate now we can applying algorithm, technique .
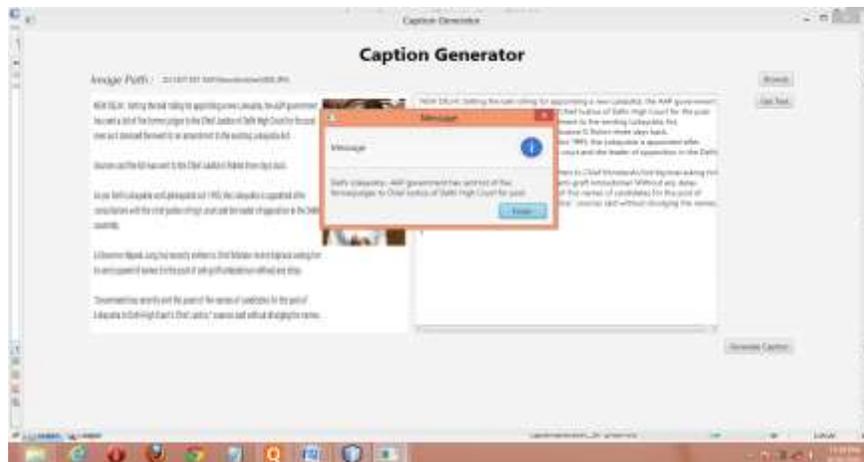
Figure 7: Output for Caption generation for news images

The after text extraction, we can apply the algorithm for generate the caption for using the algorithm are headline pattern algorithm, this algorithm can be help for to generate the caption for the news text images.

CONCLUSION

The previous approach was dealing with simple heuristic rules which did not give proper results. We will propose a system to find caption using Key Extraction Algorithm and Headline Pattern Algorithm which gave efficient results compared to previous system. These frequent set of keywords improved the accuracy of text extraction from text image using different news images. We have extracted all the news image related data which will be useful for finding headline pattern and ultimately extracting meaningful caption for a news text images.

The proposed method infer that news text images are take to the GUI and extract the text of that particular image. An efficient method of extracting text images from content based information extracting for text and searching methods that search the caption with respect to content of images. Here getting the optimized output at the end user in an efficient manner. JPEG compression is there, to low complexity is introduced to reduce the query delivery latency while maintaining comparable search accuracy.

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