SECLUSION PRESERVING WITH PALM PIECE OF PAPER MANUSCRIPT EFFICACY

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ABSTRACT:
In Asian nation there square measure several organizations/institutions committed for defense of ancient palm leaf manuscripts so as to store our precious data writings. As the time passes by, these palm leaves have gotten spoiled by artificial and natural components. With the growing technology worldwide, we tend to square measure aimed to alter of these palm leaf manuscripts that square measure obtainable in our university library. One such objective is to develop an efficient image processing system for effective retrieval of metadata automatically from these manuscripts.
Key Words: Palm Leaf Manuscripts; Digitizing; Cataloguing; Metadata; Digital Image Processing; Automatic Extraction

I. INTRODUCTION

Manuscript means any information that is hand written. It is usually associated with ancient writings of the past men. Palm leaflets square measure one in all the oldest and most cost-effective materials used for writing. Palm leaf manuscripts (Figure 1) square measure made from 2 main styles of palms specifically wine palm and fan palm.
Although palm leaf manuscripts size differs among alternative components of the globe,
The standard size is forty eight and four centimetres long and breadth. As the time gone several palm leaves square measure beneath severe extinction from numerous alternative external components like wetness, fungus, ants and cockroaches and plenty of additional. SCSVMV University started conserving its Palm Leaf Manuscripts for future generations and created them obtainable within the university library by digitizing then and storing them consequently. It has a set of ~5000 manuscripts collected from numerous sources. The collection principally contains of manuscripts written in Grantham Script (~80%) that belong to Tamil, Telugu, Hindi, Kannada, and Malayalam languages. Each bundle of leaves is typically tied in conjunction with wire threads through 2 holes perforated through the complete manuscript by the insertion of bamboo strips. The resultant bundle is completed by adding the significant picket covers at the either sides of the leaves, also tied by the cords or wrapped with a soft textile cloth. The total variety of manuscripts obtainable in SCSVMV University manuscripts section are often unreal

II. LITERATURE SURVEY

Review of related literature reveals that a few studies/surveys have been conducted on the subject in India and abroad. However, some of these studies which are directly related to the present study conducted at national and international levels are as under:
Basu (1950) conducted a study on „Museum method and the process of cleaning and preservation/library preservation. This perhaps is the oldest doctoral research in the field of Library and Information Science (LIS). The findings of the study do not provide much help in the present scenario. Sutton (1967) gives a general glimpse of the Library's European and oriental books, manuscripts, drawings and other resources. The book classifies resources of the Indian Office Library into four main categories: printed books, manuscripts, drawings, prints and photographs. It also highlights miscellaneous properties of the library such as coins, lantern slides, textile samples, epigraphical material and copperplate inscriptions. The

author has also given an account of microfilming of oriental manuscripts undertaken since 1950 as a preservation measure.

Winger and Smith (1970) edited papers presented at the 34th Annual Conference of the Graduate Library School held in 1969. The papers are related to different aspects of deterioration and preservation of library materials. Through these papers, the librarians are provided with useful tips for conserving their collections.

Lal (1971) considers preservation as a national issue and stresses the need for a concentrated scientific approach in tackling it with the best modern scientific methods by technical persons. Objectives for efficient preservation programme have been specified.

Cunha & Cunha (1971) highlight various facts of conservation. In fact it is a practical guide for librarians, archivists, curators and conservators. It suggests that preservation and conservation of library materials is extremely complicated and there is still much to learn in this direction.

Mukherjee (1973) focuses on history of preservation in ancient times. He describes the nature of writing materials, various enemies of library collection and their preventive and curative measures. Ideal conditions for storage of library materials and various methods regarding their repair have also been discussed.

Langwell (1974) gives the history of paper making up to the modern times. Talks about the causes of damage to paper due to atmospheric pollution and numerous other factors. Inks, adhesives, binding materials used in the making of books and techniques associated with them have also been discussed.

Mehta (1976) elaborates at length on the preservation of library materials with special reference to Indian context.

Baker & Saroka (1978) present a collection of informative essays on preservation and conservation which provide answers to basic questions on preservation such as: why materials must be preserved, who should preserve and how should the work be done? These essays provide rich guidelines in the realisation of conservation objectives.

Banks (1978) elaborates on the birth of preservation together with the birth of written records. With the passage of time there has been diversity and complexity in record materials which in turn has created several preservation problems that need to be updated and redefined with time. Banks has elaborated upon various preservation methods and the factors responsible for damage and deterioration of library materials. A fair description of remedial measures to be adopted for individual problems and need to educate librarians and archivists on preservation of materials in their custody has been discussed.

III. EXISTING PROCESS

The problem of preservation of rare documents has continuing ever since people at large non inheritable the data of writing. It may be geographical area, Assyria, Sumeria, China or India; the scribes were always worried to preserve their writings for posterity with whatever means they had. Scholars like Aristotle, Ovid and Horace were also worried about the safety of the manuscripts from the insects. Many image process techniques are planned for the economical knowledge retrieval. Some of the techniques embody image sweetening, segmentation, processing, restoration, compression and acquisition. All these techniques have numerous algorithms that area unit enforced with success with desired results. Since 100 % correct recognition rate is not possible with noise and different distorted mediums decisive the correct technique for image process is extremely troublesome.

IV. PROPOSED METHODOLOGY

We propose this paper contains information about some image processing techniques and algorithms applied on palm leaf manuscripts proposed by different authors for successful data retrieval. Preservation of manuscripts may be a significant issue for the custodians throughout the planet. Palm leaf manuscripts represent our most precious national heritage as rare items of recorded data. These manuscripts area unit the powerful medium for preservation of our literary, linguistic, artistic and cultural heritage. These area unit the sole supply of the unknown and unknowable. So each potential effort should be taken to save lots of these treasures for the longer term generation.

V. IMPLEMENTATION RESULTS

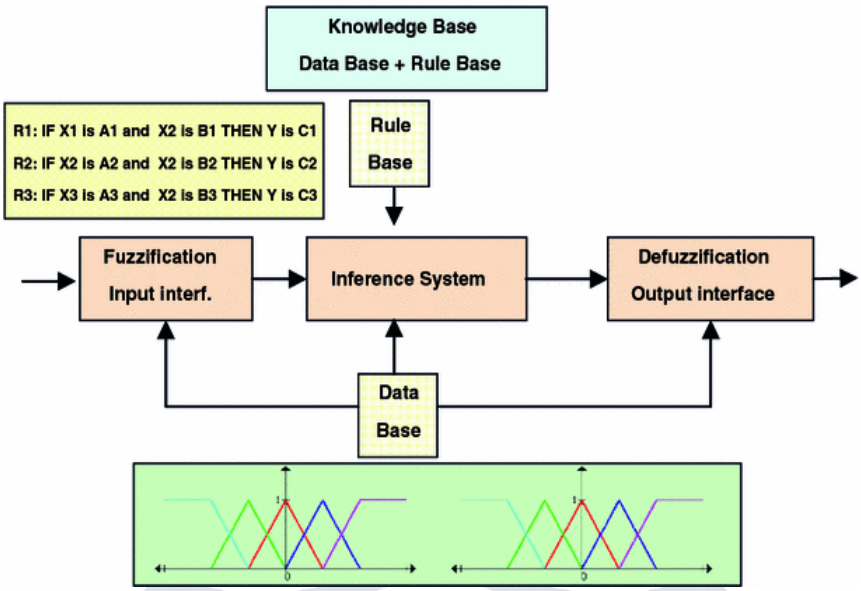

Image Enhancement

The Authors in mainly focused on image processing techniques which offer an approach selection to counter the degradation quality and make them readable. He classified them to three methods as follows:

(a) Binarization/ Thresholding method

(b) Hybrid Binarization/ Thresholding and other methods

(c) Non-Threshold based methods

Image conversion [2]:

Here the image is converted from RGB image to grey scale. When we convert it, it depends on the sensitivity response curve detector of light as a function of wavelength. The equation is: Y = 0.3R + 0.59G + 0.11B.

Reduction of Noise:

The process of eliminating noise from an image is called as Gaussian filtering. The process to apply on each pixel in the image.

Background Elimination:

The main idea is to find an optimal threshold that divides the image objects by finding the two classes from any grey level.

Line Segmentation:

The horizontal PPA is adopted by the author because the texts in many ` images are scaled along the horizontal row. It computes black pixels for each column of the image. When the horizontal projection profile is applied image, a column vector is obtained. Elements of this column vector are the total of picture element values in every row of the document image.

Character Segmentation:

In this paper as a final step, the extracted lines are segmented into characters. To find the boundaries between the characters, he applied a threshold value on the length of the space in-between the characters.

Data Retrieval the characters of palm leaf have depth property. The 3D features on Telugu language are extracted using Decision Tree approach. Generally, Telugu has more than 62 million speakers around the globe.

VI. CONCLUSION

Although tons of analysis works exist within the field of image process in context with palm leaf manuscripts, but there is a need to prepare an efficient database (DB) for the automation and digitalisation of these manuscripts which can be accessed by all the researchers worldwide (such as a manuscripts DB). All the techniques discussed above gave good results but more work has to be done on Indian languages due to large character set and linguistic features. From this study, few data sets of manuscripts are used for obtaining the test results but there is a need to train and test huge data sets.

VII. FUTURE ENHANCEMENT

From our experiments and visual analysis, the rule has been found to figure with success in rising readability of document pictures and manufacture top quality binarized pictures and manufacture appropriate for OCR, on not solely palm leaf manuscripts however additionally on alternative aged and degraded documents like papyrus and historical document documents.

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