

AN OVERVIEW OF MEDICAL PALMISTRY SYSTEM BASED ON DIGITAL IMAGE PROCESSING TECHNIQUES

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ABSTRACT

Images are object that communicates meaningful information. Automated Medical Palmistry System (AMPS) is one of the applications in digital image processing and analysis technique. It is used in medical sector and it's helpful for the detect the diseases. Human palm shape is an input of the system. Then system applies digital image processing techniques on input images to identify certain features in the image and by using knowledge base of medical palmistry it analyzes certain features in image and predicts probable disease. To identify the nature of illness doctor use the patient's hand. Medical Palmistry is scientific study human palm. In the medical palmistry, knowledge base is used to analyze importance in the digital image and detect what are all the possible diseases. Applications of digital image processing in medical field, remote sensing, video processing, pattern recognitions, color processing, transmission, encoding etc.,

KEYWORDS: Automated Medical Palmistry System (AMPS), Knowledge Database, Human Palm, Prediction.

I.INTRODUCTION

In digital image processing, images are in analog or digital form. Aerial photography are in analog form and digital images are represented by squares or rectangular area are known as pixels. Some algorithms used on the digital image to achieve image processing. Many algorithms are used in digital image processing, it's used in input data at the stage of processing avoid the issues arises such as noise and sign distortion. The main purpose of image processing is to visualize the objects which are not visible, sharpen the image to get better image, restore the image, retrieve it back, extract the patterns and recognize the image. Medical Palmistry, the major division of Palmistry facilitates the diagnosis of diseases on devotedly focusing one's palm. By seeking the texture, shape and color of palm can know the health condition Palm positions like line, mounts, other symbols etc able to know various diseases in human body internal organs [1]. The hand geometry indicates the tendencies and behavior of a person as well as his physical health criteria. Segmentation goal is to create less complicated and modification the illustration of a picture into one thing that lot of significant and easier to evaluate and to find objects and limitations (lines, curves, etc.).

Palmistry has two branches as given:

- Chiromny – Knowledge of texture, shape of hand, quality of hand and fingers.
- Chiromancy - Knowledge of lines.

II.METHODOLOGY

KNOWLEDGE-BASED DIGITAL IMAGE PROCESSING APPLICATIONS

Knowledge engineer will basically prepare a knowledge base by using the knowledge of image processing applications which works as a strength of character of any system. In every step knowledge-base plays very important role. Knowledge based systems become more not easy the techniques used to correspond to the knowledge base became more difficult and integrated logic, term-rewriting systems, theoretical graphs, and frames.

There are 5 basic steps followed in digital image processing,

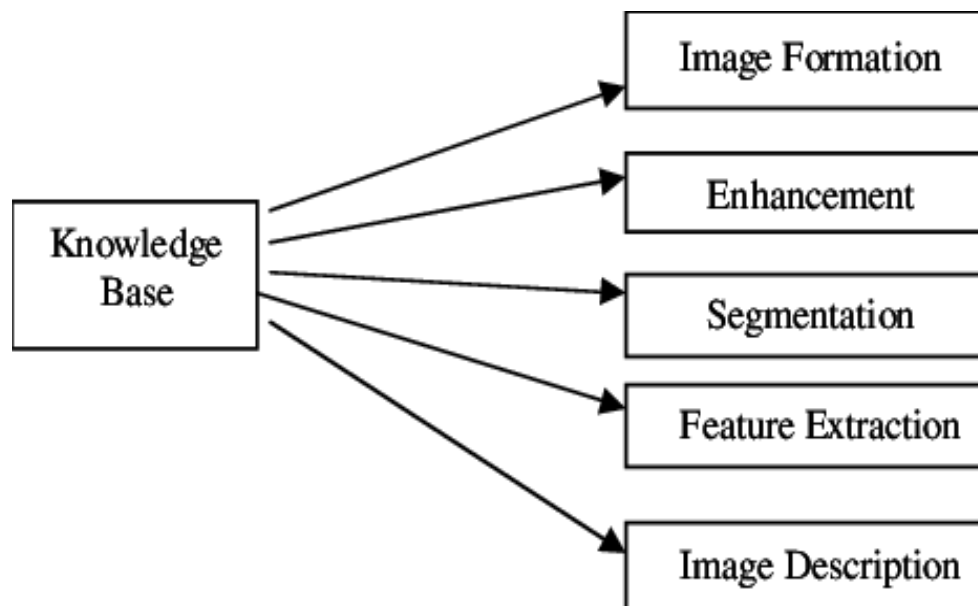


Image Formation / Image Acquisition

For image acquisition sensors or camera are used like scanner for fingerprint, CCD cameras, face etc. In image formation the radiant energy emitted from the resource is changed to 2-dimensional image. Image digitization can be done through image sampling and quantization.

Image Enhancement

This is treated as primary stage for any input image. While capturing the image, due to motion or interference some noise such as disturbance, blur etc is added automatically in the image. Features can not be extracted correctly from such images.

To improve the quality of the image, enhancement techniques such as edge sharpening, noise removal, increasing contrast etc are used.

Image Segmentation

To extract the correct features, the correct region of interest is required. Therefore the image is segmented for getting meaningful information i.e. Region of interest from it. The specific pattern can be searched easily through segmented area. For object tracking, different objects were segmented separately.

Feature Extraction

The specific pattern from a segmented image can be extracted through feature extraction algorithm. For example, If palm is a region of interest then star, grille, spots etc are the patterns for extraction.

Description / Classification

The extracted features are compared with the available database and then the identification or verification is done. For classification various techniques like neural networks are used.

III.SYMBOLS IN HUMAN PALM THAT INDICATE CERTAIN DISEASES

In this figure 1 shown the identify the diseases, place on lines, fingers and mounts.

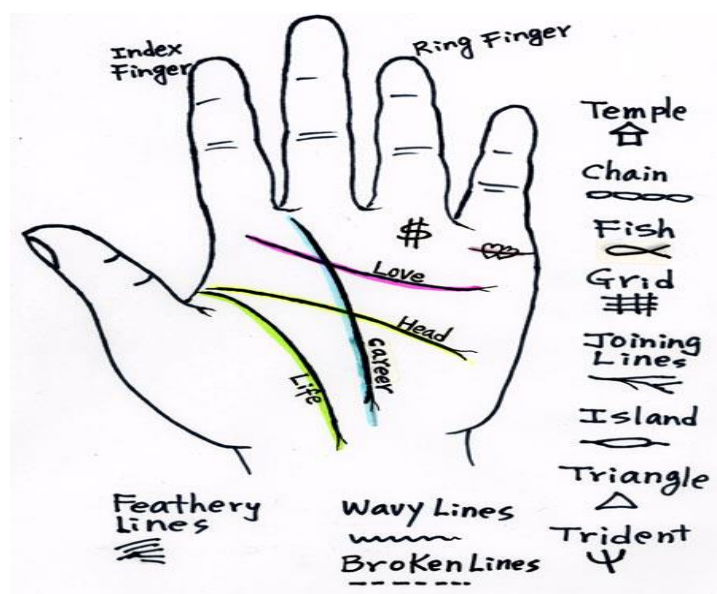


Figure.1 Human Palm Symbols

LIST OF SYMBOLS ON HUMAN PALM

In this following table lists the symbols in human palm and it describe about prediction of diseases.

SYMBOLS	PREDICTION
Chain	Lack of concentration
Triangle	Creative, success in scientific research
Feathery line	Anxiety and worry
Island	Inherited heart disease, headache
Star	Urinal diseases

IV.AUTOMATED MEDICAL PALMISTRY SYSTEM

Computerized Medical Palmistry System enables patients to analyze the diseases in human body by taking picture of patients palm as info. At that point, framework applies advanced image preparing and investigation methods on info pictures to recognize certain highlights in the image [4]. Knowledge base of medical palmistry it breaks down specific highlights in picture and predicts plausible infection. In this way, client can depend on forecasts done by the framework. Restorative palmistry is that the art of overseeing wellbeing by understanding the side effects of imminent sicknesses that may some way or another take a long time to show themselves. It assumes the work of PCs for human structure and gives early cautioning information concerning concealed illnesses.

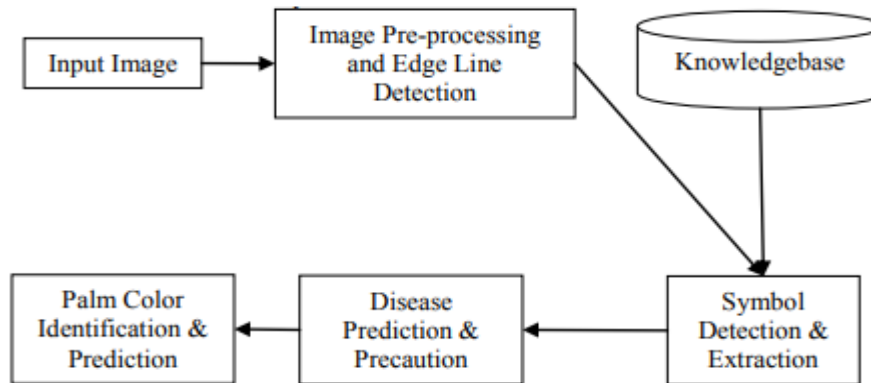


Figure.2 Architecture of the System

ADVANTAGES OF AMPS

- It predict the diseases in earlier.
- Cost beneficial for a treatment.
- It is helpful for doctors to identify diseases easily.

V.CONCLUSION

This paper proposes new methodology with in the field of Medical chiromancy with the help of advanced picture procedure and investigation technique. AMPS permits patients to analyze the sicknesses in body by taking picture of patients palm as information. At that point, framework applies advanced picture procedure and investigation strategies and utilizations information space of medicinal chiromancy on info picture to spot beyond any doubt alternatives with in the picture.

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