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Fake Indian Currency Recognization

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ABSTRACT

India is a developing country, Creation, and print of counterfeit currency of Rs.100, 500 and 1000 is by now there but after demonetization, the counterfeit notes of new Rs.50, 200, 500, 2000 have also come darkness in very tiny time and which achieve the country's monetary growth. From few years due to technological improvement in color printing, duplicating, and scanning, counterfeiting troubles are coming into the picture. In this a work, recognition and confirmation of paper notes with the help of digital image processing technique is described. The personality insertion is perform by picture of notes and it compared by the character of the real notes. The notes will be predictable and verified by using image processing techniques. The move toward consists of works including image processing, edge detection, image segmentation and characteristic extraction and comparing images. The preferred outcome will be text output of the notes recognized and confirmed.

Keywords: Currency Recognition, Image Processing Technique, Image Character Extraction, Segmentation Currency Verification.

I. INTRODUCTION

Technology is getting extremely speedy these days. Consequently, All banking department also modern day by day. Every day there is a drastically changes happening in technologies, The technologies give the techniques to identify the currency. Lot of searching of data for identifying fake note we researched and developed a automatic detection note machine, detect store notes is now widely using in accessing offered of modern categories like candies, soft munchies pot to automobile or railway ticket. These technologies is used for currency recognition essentially aim for identify and extract noticeable and hidden features of cash notes. From gasoline stations to the restricted vegetable seller, each one is cagey of accommodating stock annotations in Rs.50, 200,500 and Rs.2,000 (even be at large past the demonetization) a greater element of them are more or less impractical to tell beginning legitimate store notes. This usually effected of forge on the market is price rises. This allow resolution to is at the moment presented for general chap to discover make out imitation notes is "Fake Note Detector Machine". This device is by and large accessible in banks which can accessible all moment by the usual resident. every these scenario want a category of way out for general public to critic a copied collection note with to exhortation our coins from winning its price.

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II. PROBLEM DEFINITION & PROPOSED SYSTEM

Now a days the technology is extremely fast growing in the globe. This increasing of technology the every year administration or bank sector faces the problem of fake currency. This problem is very serious problem in India now a day. Similarly the government is also improving day to day but using high printing skill counterfeit circulate the fake banknote in the Indian bazaar [1]. The Reserve Bank of India (RBI) in latest yearly report said that the during 2017-2018, 17,929 pieces of Rs 2,000 notes be detected in 2017-2018 while only 638 counterfeit notes of the similar value had been detected the year before. In the past, public detecting of fake banknote only guide or a hardware device which is not easy available in bazaar [3]. The technology of notes detection system basically use for recognition and extraction the features of bank note

The projected method of expose there of 2 parts

- Currency Recognition
- Currency Verification

- **Currency Recognition:**

In notes appreciation, we perceive also separate the quantity notes with the facilitate of figure meting out. now we be extract the skin tone of the acquire figure. We be pursue the follow ladder.

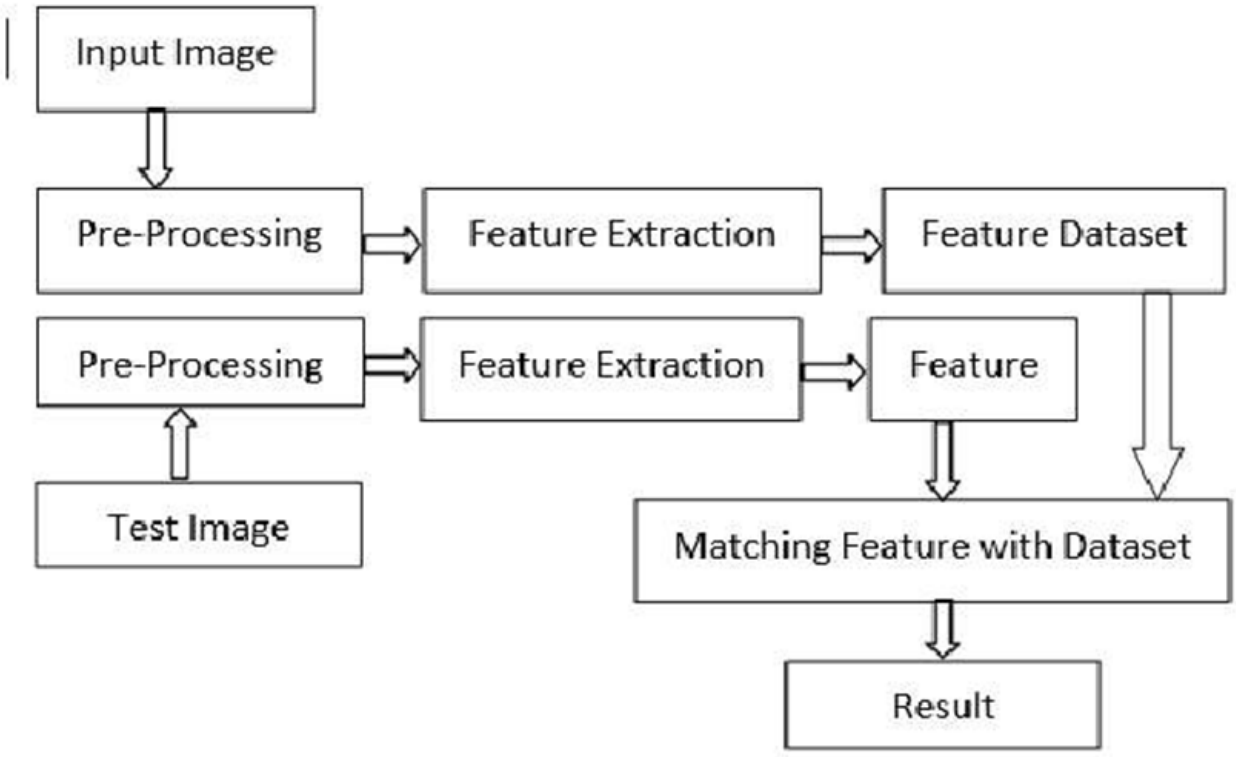

Fig -2: Proposed Detection System

1. **Image Acquisition:** The stage picture acquirement in picture giving out is always the initial footstep in the job flow run since, lacking an picture, no meting out is potential. After the figure has been obtained, a

mixture of method of dispensation can be functional to the illustration to present the countless diverse mental picture tasks.

2. **Pre-processing:** The foremost aim pre-processing to improve the diagram manifestation of descriptions and look up the handling of data sets. picture pre- processing, too call picture restitution, and involve the modification of deformation,

3. **Edge Detection:** border recognition be the names for a put of numerical method over to at identify point in a latest picture on which the figure brilliance change stridently or, new properly, have sum continuity.

4. **Picture Segmentation:** picture segmentation is the practice partition a digital picture keen on many segment (set of pixels, too famous as fantastic pixels). The target of segment is to abridge transform is depiction of access picture keen on great that be extra significant and easy to study.

- **Currency Verification:**

Image Acquisition: performing arts picture attainment in picture meting out is always the first stride in the work flow run as, exclusive of an likeness, refusal meting out is potential.

Pre-processing: The key aspiration of the pre- processed to improve the diagram form of similes and look up the exploitation of figures set.

Haar Skin Extraction: Aar-even skin are latest picture skin texture what are functioning just on picture intens (i.e) RGB standards of all and each pixel here an picture.

Feature Assessment: Even foremost aim is to evaluate the extract skin tone with the store skin tone even are kept in numbers sets which offer the outcome.

III. METHODOLOGY

The organization planned here job on the picture of Indian notes letter acquire by a digital camera. The system which is useful here is as follow.

a. Achievement of picture of Indian notes memo by easy latest handy or scan.
b. Picture want is RGB picture and transformed to Gray over picture.
c. Border discovery of whole aged scale picture.
d. Currently Indian notes skin tone of the essay exchange both view and turn around will be crop and segmented.
e. Spot from side to side inventory: The diminutive flowery devise written equally on the spectator side reverser surface (filled up) with note colour.

IV. RESULTS AND DISCUSSION

Figure 4.1: Image Acquisition of 2000 rs note Attribute drawing out of system capture the chart pleased of descriptions for indexing & recovery. ancient or low-level picture skin can be whichever broad skin tone, The consequences of the quality pulling out are planned and compare with standards give productivity of the Rectifies Fig [4.2].

Fig.[4.2]-Recognized Currency

The facial appearance are extracting with kept meant this evaluation present those confirmation outcome. Below diagram[4.3],[4.4]

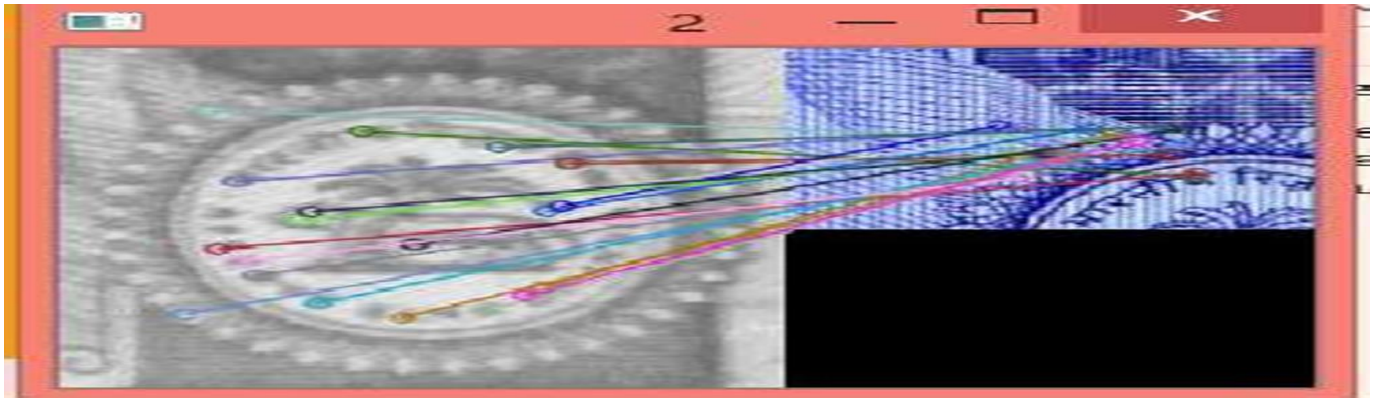

Fig [4.3]-Haar features extracted

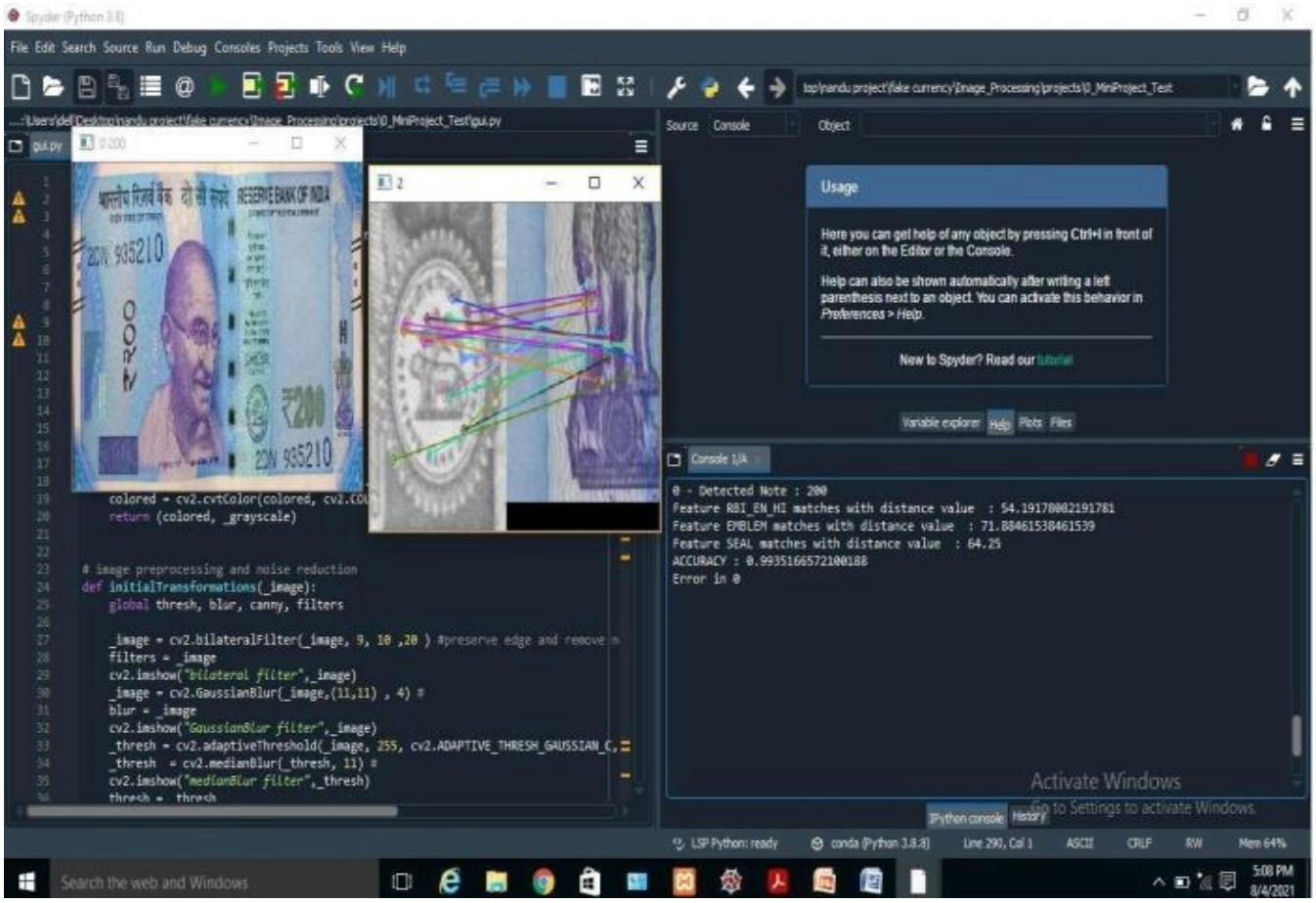

Fig [4.5]Output of Valid Currency

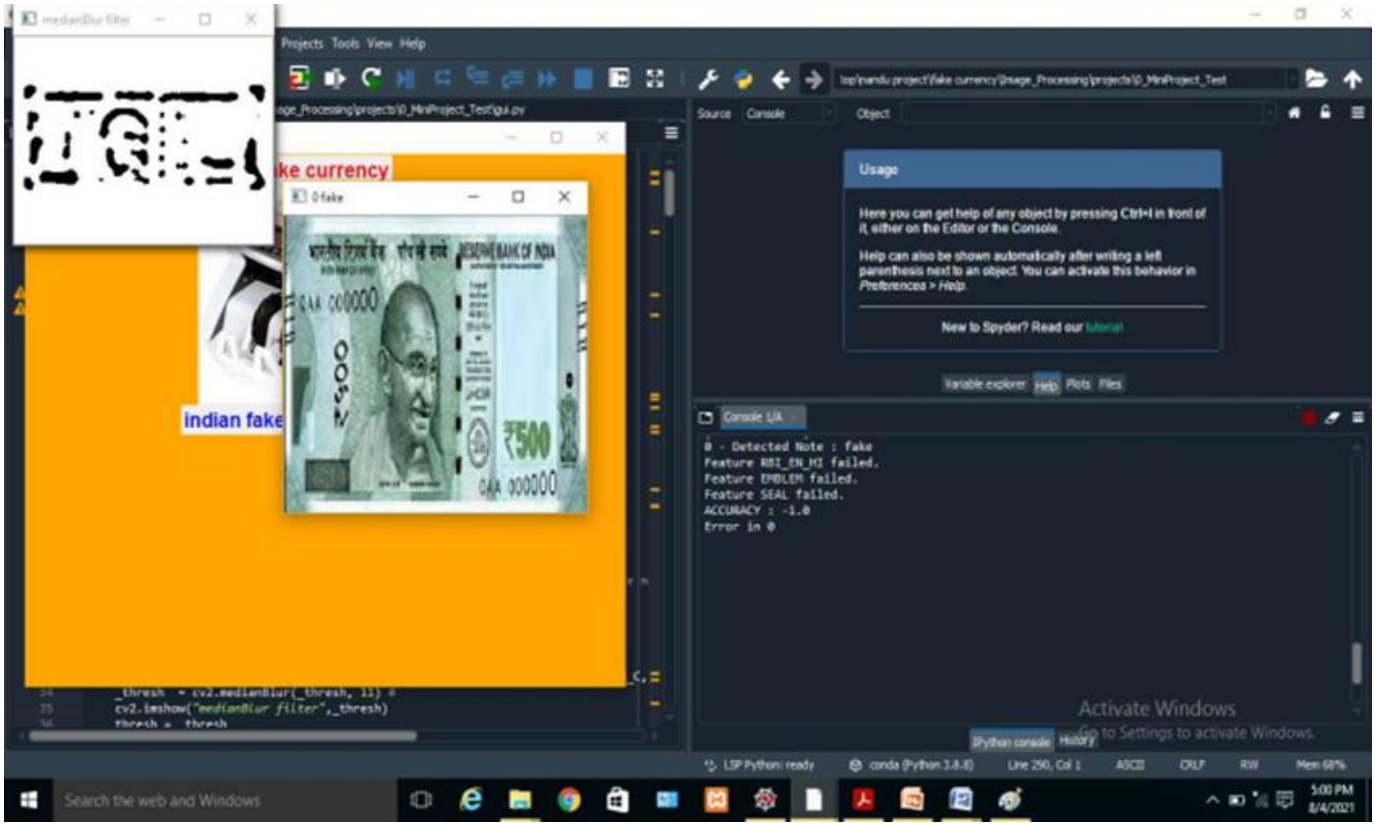

Fig [4.6] Output of Fake Currency

Attribute drawing out of system capture the chart pleased of descriptions for indexing & recovery.

V. CONCLUSION

By means of digital picture meting out, study of exchange picture is further correct as fighting fit as this system is proficient in language of fee and time unbearable compare to presented technique. Day by day study vocation is mounting in this ground and a variety of representation processing technique are implemented in array to find a supplementary correct consequence.

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