SKIN DISEASE PREDICTION USING IMAGE PROCESSING

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Abstract: Skin disorders are common in children. Children can experience many of the same skin conditions as adults. Infants and toddlers are also at risk for diaper-related skin problems. Since children have more frequent exposure to other children and germs, they may also develop skin disorders that rarely occur in adults. Many childhood skin problems disappear with age, but children can also inherit permanent skin disorders. In most cases, doctors can treat childhood skin disorders with topical creams, medicated lotions, or condition-specific drugs. So it is very necessary to detect skin disease in early stage. Skin disorders vary greatly in symptoms and severity. They can be temporary or permanent, and may be painless or painful. Some have situational causes, while others may be genetic. Some skin conditions are minor, and others can be life-threatening.While most skin disorders are minor, others can indicate a more serious issue.Keywords: skin disease, image processing, segmentation, etc.

Keywords: skin disease, python, web, etc

I. INTRODUCTION

Skin disease can be temporary or permanent.
Temporary skin disorders
Many temporary skin conditions exist, including contact dermatitis and keratosis pilaris.
Contact dermatitis
Contact dermatitis is one of the most common occupational illnesses. The condition is often the result of contact with chemicals or other irritating materials. These substances can trigger a reaction that causes the skin to become itchy, red, and inflamed. Most cases of contact dermatitis aren't severe, but they can be rather itchy. Topical creams and avoiding the irritant are typical treatments.
Keratosis pilaris
Keratosis pilaris is a minor condition that causes small, rough bumps on the skin. These bumps usually form on the upper arms, thighs, or cheeks. They're typically red or white and don't hurt or itch. Treatment isn't necessary, but medicated creams can improve skin appearance.
Permanent skin disorders
Some chronic skin conditions are present from birth, while others appear suddenly later in life.

The cause of these disorders isn't always known. Many permanent skin disorders have effective treatments that enable extended periods of remission. However, they're incurable, and symptoms can reappear at any time. Examples of chronic skin conditions include:
rosacea, which is characterized by small, red, pus-filled bumps on the face
psoriasis, which causes scaly, itchy, and dry patches
vitiligo, which results in large, irregular patches of skin
Skin disorders in children
Skin disorders are common in children. Children can experience many of the same skin conditions as adults. Infants and toddlers are also at risk for diaper-related skin problems. Since children have more frequent exposure to other children and germs, they may also develop skin disorders that rarely occur in adults. Many childhood skin problems disappear with age, but children can also inherit permanent skin idisorders. In most cases, doctors can treat childhood skin disorders with topical creams, medicated lotions, or condition-specific drugs.

II. RELATED WORK

Common childhood skin disorders include:

- eczema
- diaper rash
- seborrheic dermatitis
- chickenpox
- rashes from allergic reactions
- Symptoms of skin disorders

Skin conditions have a wide range of symptoms. Symptoms on your skin that appear due to common problems aren't always the result of a skin disorder. Such symptoms can include blisters from new shoes or chafing from tight pants. However, skin problems that have no obvious cause may indicate the presence of an actual skin condition that requires treatment.

Skin irregularities that are typically symptoms of a skin disorder include:

- raised bumps that are red or white
- a rash, which might be painful or itchy
- scaly or rough skin
- peeling skin
- ulcers
- open sores or lesions
- dry, cracked skin
- discolored patches of skin
- fleshy bumps, warts, or other skin growths
- changes in mole color or size
- a loss of skin pigment
- excessive flushing

Proposed system is a web based application which will detect skin disease according to the training dataset.
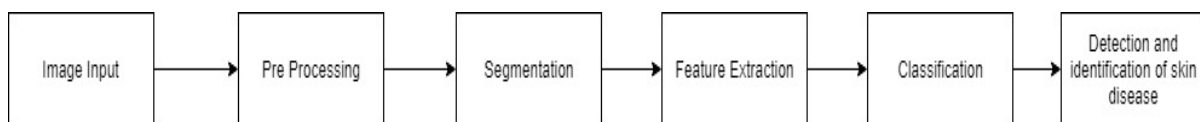
III. METHODOLOGY


Fig: Skin Disease Prediction

The system will go through various operations such as first input image is given , which will go under pre processing, segmentation, feature extraction, classification. In preprocessing the unwanted part is removed, segmentation will divide the area of interest into number of parts, feature extraction phase will extract the data and will store it for comparison pupose. After classification phase and comparison finally the disease is detected.

IV. EXPERIMENTAL RESULTS

The system uses a approach for detection and prediction process which effectively amalgamates image processing and machine learning. In the 1st stage, the image of the skin condition is subject to numerous types of pre-processing techniques followed by feature extraction. The extracted features for each image are then converted to a feature vector and finally disease is predicted using standard dataset.
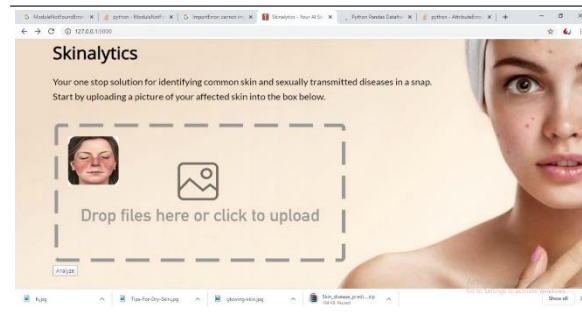
a) Skinalytics
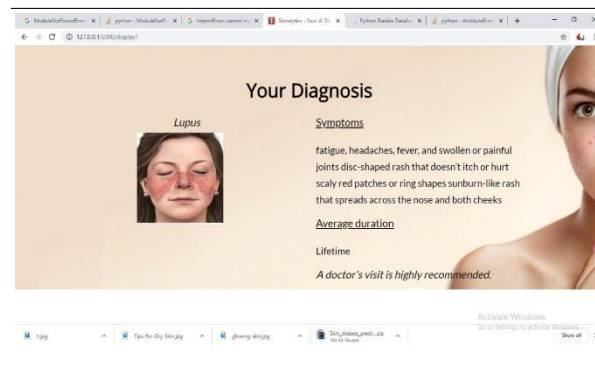
b) Diagnosis

First we have to login then we have to process the image as we have shown here in a) we have to upload the image after that as shown in fig b) we get the result of our skin disease that is diagnosis like symptoms and average duration and so on.

V. CONCLUSION

Thus we are going to implement a prototype windows based software application in python for skin disease prediction using image processing . We are going to perform operations such as:
1. Pre processing
2. Segmentation
3. Feature Extraction
4. And disease prediction

As it is a prototype model , the accuracy will not be up to the mark , so it will need some improvements and commercial tools to develop a large scale application, which can be done in future after successful implementation of this project. whereas the Microsoft Word templates are self-contained.

VI. REFERENCES

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