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VARICOSE VEIN DETECTION

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INTRODUCTION

- Varicose veins are a common medical condition affecting many individuals around the world.
- The proposed system achieves a high accuracy rate in detecting varicose veins, which can aid in early diagnosis and treatment.
- The proposed system takes CT / ultrasound images of the affected area as input.
- It produces a binary classification output, indicating whether the image contains varicose veins or not.
- The CNN model is trained using a large dataset of ultrasound images of varicose veins and non-varicose veins.

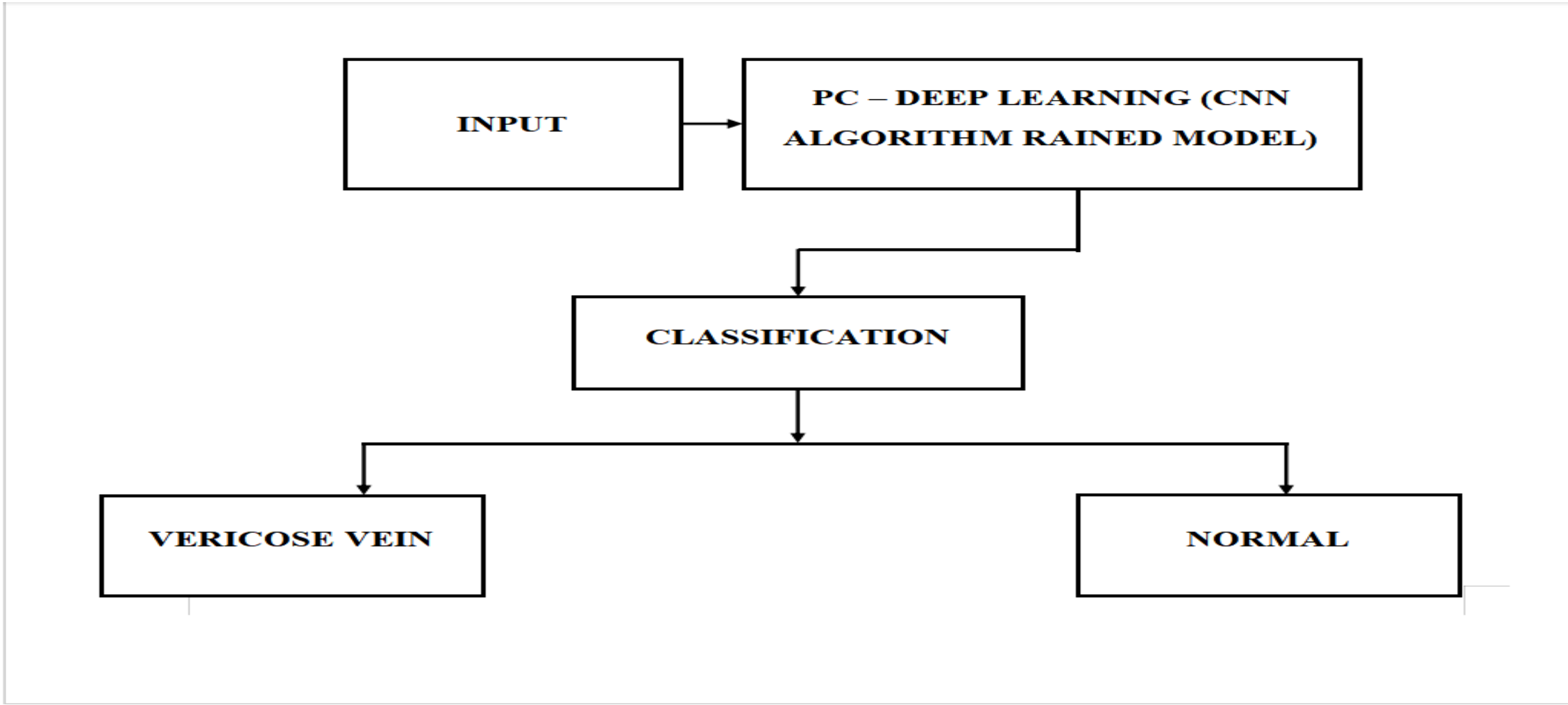
EXSISTING SYSTEM

- In the existing system, CBP system is featured with a blue light photoplethysmography sensor embedded in finger/toe cuffs to probe skin capillary pulsations.
- The experimental results demonstrated the proposed CBP system can track local CBP changes induced by different levels of venous congestion.
- Leveraging the decision tree technique, we demonstrate the use of a multi-site CBP measurement at fingertips and toes to classify four categories of subjects (total N = 40) including patients with peripheral arterial disease, varicose veins and heart failure

PROPOSED SYSTEM

- The proposed system would involve using a CNN to analyze images of a patient's legs to detect varicose veins.
- The pooling layers would down sample the images to reduce their size and complexity, while the fully connected layers would classify the images as either normal or abnormal .
- Once the CNN has been trained, it can be used to analyze new images of a patient's legs to detect varicose veins.
- The proposed system involves collecting a large dataset of images, training a CNN model on the dataset, and using the model to detect varicose veins in new images.

FLOWCHART


INPUT
PC – DEEP LEARNING (CNN ALGORITHM RAINED MODEL)
CLASSIFICATION
VERICOSE VEIN
NORMAL

PLATFORM USED

- Python compiler
- Tensorflow
- OpenCv
- NumPy

CONCLUSION

The study demonstrates the potential of deep learning algorithms in medical image analysis and highlights the importance of accurate varicose vein detection for timely diagnosis and treatment. Further studies with larger datasets and other imaging modalities are warranted to validate these results and improve the accuracy of varicose vein detection further.

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