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Tissue Classification and Segmentation of Pressure Injuries Using Convolutional Neural Networks

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HIGHLIGHTS

- In this paper we presented an approach for automatic tissue segmentation using a Convolutional Neural Network. The methodology is based on the classification of different tissue types: Necrotic, granulation and slough.
- We present different metrics to evaluate our approach, obtaining an overall average classification accuracy of 92.01%, an average total weighted Dice Similarity Coefficient of 91.38%, and an average precision per class of 97.31% for granulation tissue, 96.59% for necrotic tissue, and 77.90% for slough tissue.
- By using this methodology, we were able segment complicated structures within the image to be recognized, providing a robust method for Pressure Injuries assess.

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