[3] Sarangapany, T.; Darmanayagam, S.E.; Rajamanickam, P.; Raj, S.R. (2021). An Enhanced Approach for Skin Lesion Smoothening and Segmentation from Dermoscopic Images. *Solid State Technology* **64**(2), pp. 2645-58.
[4] Jones, O.T.; Ranmuthu, C.K.; Hall, P.N.; Funston, G.; Walter, F.M. (2020). Recognising skin cancer in primary care. *Advances in therapy* **37**(1), pp. 603-16.
[5] Kawaguchi, M.; Kato, H.; Tomita, H.; Hara, A.; Suzui, N.; Miyazaki, T.; Matsuyama, K.; Seishima, M.; Matsuo, M. (2020). Magnetic resonance imaging findings differentiating cutaneous basal cell carcinoma from squamous cell carcinoma in the head and neck region. *Korean journal of radiology* **21**(3), pp. 325-31.
[6] Zghal, N.S.; Derbel, N. (2020). Melanoma skin cancer detection based on image processing. *Current Medical Imaging* **16**(1), pp. 50-8.
[7] Ningrum, D.N.; Yuan, S.P.; Kung, W.M.; Wu, C.C.; Tzeng, I.S.; Huang, C.Y.; Li, J.Y.; Wang, Y.C. (2021). Deep Learning Classifier with Patient's Metadata of Dermoscopic Images in Malignant Melanoma Detection. *Journal of Multidisciplinary Healthcare* **14**, pp. 877.
[8] Senan, E.M.; Jadhav, M.E. (2021). Analysis of dermoscopy images by using ABCD rule for early detection of skin cancer. *Global Transitions Proceedings*. **2**(1), pp. 1-7.
[9] Khan, A.H.; Iskandar, D.N.: Al-Asad, J.F.: El-Nakla, S. (2021). Classification of skin lesion with hair and artifacts removal using black-hat morphology and total variation. *International Journal of Computing and Digital Systems* **10**, pp. 597-604.
[10] Singh, L.; Janghel, R.R.; Sahu, S.P. (2021). Automated CAD System for Skin Lesion Diagnosis: A Review. *Advances in Biomedical Engineering and Technology* pp. 295-320.
[11] Khan, M.A.; Sharif, M.; Akram, T.; Damaševičius, R.; Maskeliūnas, R. (2021). Skin lesion segmentation and multiclass classification using deep learning features and improved moth flame optimization. *Diagnostics*. **11**(5), pp. 811.
[12] Araújo, R.L.; de Andrade, L.R.R.; Rodrigues, J.J.; e Silva, R.R. (2021). Automatic Segmentation of Melanoma Skin Cancer Using Deep Learning. *In 2020 IEEE International Conference on E-health Networking, Application & Services (HEALTHCOM)* pp. 1-6.
[13] Barata, C.; Celebi, M.E.; Marques, J.S. (2018). A survey of feature extraction in dermoscopy image analysis of skin cancer. *IEEE journal of biomedical and health informatics* **23**(3), pp. 1096-109.
[14] Taufiq, M.A.; Hameed, N.; Anjum, A.; Hameed, F. (2017). m-Skin Doctor: A mobile enabled system for early melanoma skin cancer detection using support vector machine. *IneHealth 360°. Springer, Cham* pp. 468-475.
[15] Abbes, W.; Sellami, D.; Marc-Zwecker, S.; Zanni-Merk, C. (2021 Apr 18). Fuzzy decision ontology for melanoma diagnosis using KNN classifier. *Multimedia Tools and Applications* pp.1-22.
[16] Ünver, H.M.; Ayan, E. (2019). Skin lesion segmentation in dermoscopic images with combination of YOLO and grabcut algorithm. *Diagnostics* **9**(3), pp. 72.
[17] Albahli, S.; Nida, N.; Irtaza, A.; Yousaf, M.H.; Mahmood, M.T. (2020 Nov 3). Melanoma lesion detection and segmentation using YOLOv4-DarkNet and active contour. *IEEE Access* **8**, pp.198403-14.
[18] Ramya, J.; Vijaylakshmi, H.C.; Saifuddin, H.M. (2021). Segmentation of skin lesion images using discrete wavelet transform. *Biomedical Signal Processing and Control* **69**, pp. 102839.
[19] Sikkandar, M.Y.; Alrasheadi, B.A.; Prakash, N.B.; Hemalakshmi, G.R.; Mohanarathinam, A.; Shankar, K. (2021). Deep learning based an automated skin lesion segmentation and intelligent classification model. *Journal of ambient intelligence and humanized computing* **12**(3), pp. 3245-55.
[20] Öztürk, Ş.; Özkaya, U. (2020). Skin lesion segmentation with improved convolutional neural network. *Journal of digital imaging* **33**(4), pp. 958-70.
[21] Kaur, R.; Hosseini, H.G.; Sinha R. (2021). Deep Learning in Medical Applications: Lesion Segmentation in Skin Cancer Images Using Modified and Improved Encoder-Decoder Architecture. *Geometry and Vision*. **1386**, pp. 39.
[22] Adegun, A.A.; Viriri, S.; Yousaf, M.H. (2021). A Probabilistic-Based Deep Learning Model for Skin Lesion Segmentation. *Applied Sciences* **11**(7), pp. 3025.
[23] Sivanesan, U.; Braga, L.H.; Sonnadara, R.R.; Dhindsa, K. (2019). Unsupervised medical image segmentation with adversarial networks: From edge diagrams to segmentation maps. *arXiv preprint arXiv:1911.05140*.

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