DATASETS AND RESULTS
of the paper "Hair Removal combining Saliency, Shape and Color"

The available material is constituted by datasets and some results of the paper "Hair Removal combining Saliency, Shape and Color", https://doi.org/10.3390/app11010447.

This material is intended for supporting the possibility of comparison by other authors.

In case of publishing results obtained utilizing this material please refer to the following paper:

G. Ramella, "Hair Removal combining Saliency, Shape and Color", Applied Sciences, 11 (1), pp. 447-474, 2021

Material description

The images are extracted from PH2 and ISIC2016 database, whose bibliographic reference is:

- PH2. Mendonca, T.; Ferreira, P.M.; Marques, J.S.; Marcal, A.R.; Rozeira, J. PH2–A public database for the analysis of dermoscopic images. In Dermoscopy Image Analysis; Celebi, M.E., Mendonca, T., Marques, J.S., Eds.; CRC Press: Boca Raton, FL, USA, 2015; pp. 419–439.

- ISIC 2016. ISIC Archive: The International Skin Imaging Collaboration: Melanoma Project, ISIC. Available online: https://isic-archive.com/# (accessed on 5 January 2016).

All images are saved in Bitmap format without any compression and with the original File names.

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The shared folders, named **H-data_image_results** and **NH-data_images_results**, are related respectively to the two following datasets:

• *H-data* containing 170 images extracted from PH2 and ISIC2016 databases with evident hair

• *NH-data* containing 170 images extracted from PH2 and ISIC2016 databases without hair

Description of the folder H-data_image_results

In the folder **H-data_image_results** there are two subfolders:

- **H-data** containing the images and the results relative to *H-data*
- **sH-data** - containing the images and the results relative to the sample of 13 images of *H-data*.

These subfolders are organized in subfolders according to a similar subdivision.

For the folder **H-data** there are the following subfolders named:

- **H-data_images** containing 170 images of *H-data*;
- **H-data_Lee** containing the subfolders named **H-data_Lee_results** and **H-data_Lee_masks** which, in turn, containing the image results and the corresponding masks generated by the Lee method on *H-data*;
- **H-data_Xie** containing the subfolders named **H-data_Xie_results** and **H-data_Xie_masks** which, in turn, containing the image results and the corresponding masks by the Xie method on *H-data*;
- **H-data_Ramella** containing the subfolders named **H-data_Ramella_results** and **H-data_Ramella_masks** which, in turn, containing the image results and the corresponding masks generated by the Ramella method on *H-data*.

For the folder **sH-data** there are the following subfolders named:

- **sH-data_images** containing 13 images of *sH-data*;
- **sH-data_Lee** containing the subfolders named **sH-data_Lee_results and sH-data_Lee_masks** which, in turn, containing the image results and the corresponding masks generated by Lee method on *sH-data*;
- **sH-data_Xie** containing the subfolders named **sH-data_Xie_results** and **sH-data_Xie_masks** which, in turn, containing the image results and the corresponding masks generated by Xie method on *sH-data*;
- **sH-data_Ramella** containing the subfolders named **sH-data_Ramella_results** and **sH-data_Ramella_masks** which, in turn, containing the image results and the corresponding masks generated by the Ramella method on *sH-data*.

Description of the folder NH-data_image_results

In the folder **NH-data_image_results** there are the following subfolders.

- **NH-data** containing the 170 images of *NH-data*
- **sNH-data** containing the sample of 13 of *NH-data*
- **HSim-data** containing 4 subfolders and 5 tables of measure results relative to the dataset *HSim-data* (see below for more detail)
- **sHSim-data** containing 4 subfolders (see below for more detail)

As regards the folder **HSim-data** the 4 subfolders are the following.

- **HSim-data_images** containing the 170 images of *NH-data* where the presence of hair on each image is introduced by using the HairSim method by Hengameh Mirzaalian. This dataset is named *HSim-data*.

The employed HairSim method is available online: http://creativecommons.org/licenses/by-nc-sa/3.0/deed.en_US (accessed on 26 November 2020). The folder **HSim-data_images** has two subfolders **HSim-data_results and HSim-data_masks** respectively containing the image results and the relative masks by using the HairSim method on *NH-data.*

• **HSim-data_Lee** containing the subfolders named **HSim-data_Lee_results and HSim-data_Lee_masks** respectively containing the image results and the relative masks using the Lee method on *HSim-data*;

• **HSim-data_Xie** containing the subfolders named **HSim-data_Xie_results and HSim-data_Xie_masks** respectively containing the image results and the relative masks using the Xie method on *HSim-data*.

• **HSim-data_Ramella** containing the subfolders named **HSim-data_Ramella_results and HSim-data_Ramella_masks** respectively containing the image results and the relative masks using the Ramella method on *HSim-data*.

and the 5 tables of measure results relative to the dataset *HSim-data* are the following.

▪ **Area_Table_HSim-data** containing the Hair area on the *HSim-data* for HairSim, Lee, Xie, and Ramella method

▪ **Metric_Table_HSim-data_Lee** containing the quality evaluation of the results of the Lee method on the HSim-data

▪ **Metric_Table_HSim-data_Xie** containing the quality evaluation of the results of the Xie method on the HSim-data

▪ **Metric_Table_HSim-data_Ramella** containing the quality evaluation of the results of the Ramella method on the HSim-data

▪ **TDR_Table_HSim-data** containing the False discovery rate (FDR) and true discovery rate (TDR) on the *HSim-data* for HairSim, Lee, Xie, and Ramella method.

Similarly, in folder **sHSim-data** the 4 subfolders are the following.

• **sHSim-data_images** containing the sample of 13 of *NH-data* where the presence of hair on each image is introduced by using the above HairSim method by Hengameh Mirzaalian. This dataset is named *sHSim-data* The folder **sHSim-data_images** has two subfolders **sHSim-data_results** and **sHSim-data_masks** respectively containing the image results and the relative masks by using the HairSim method on s*NH-data.*

• **sHSim-data_Lee** containing the subfolders named **sHSim-data_Lee_results and sHSim-data_Lee_masks** respectively containing the image results and the relative masks by using the Lee method on *sHSim-data*;

• **sHSim-data_Xie** containing the subfolders named **sHSim-data_Xie_results and sHSim-data_Xie_masks** respectively containing the image results and the relative masks by using the Xie method on *sHSim-data*;

• **sHSim-data_Ramella** containing the subfolders named **sHSim-data_Ramella_results and sHSim-data_Ramella_masks** respectively containing the image results and the relative masks by using the Ramella method on *sHSim-data*;

All tables relative to the dataset *sHSim-data* are available in the paper.

Note that *NH13-data*, *H13Sim-data*, and *H13GAN-data* together with the corresponding results can be found at Dermaweb. Available online: http://dermaweb.uib.es/ (accessed on 26 November 2020).