**Unconstrained Ear Recognition on ResMLP**

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Unconstrained ear recognition is a budding research field in biometrics that gained research momentum due to the ears' potential as a passive and non-intrusive means of recognizing an individual from a distance of no particular angle [1]–[3]. However, unconstrained ear recognition suffers from scarce works of literature due to:

(1) the limited number of the available unconstrained ear dataset; and

(2) coping mechanisms of existing computational techniques that are not well measured with the variable factors of ear images from the wild as such rotation, resolution, occlusions, and more.

To alleviate the said gaps above, recent papers on this topic propose the use of either image processing techniques [4]–[6] or deep learning algorithms and convolutional neural networks [7]–[9]. While these solutions presented exemplary performances, the formers are laborious, and the laters are computationally expensive. Also, unconstrained ear recognition models developed on top of CNN architectures can overfit given that available datasets of the topic are limited or scarce for the worst.

To attenuate the above gaps, this mini-project aims to explore the ResMLP [10] architecture in the context of unconstrained ear recognition using the EarVN1.0 dataset [11] and assess its performance over existing relevant solutions. ResMLP is an MLP-centric machine learning architecture that reportedly performs on par with state-of-the-art architectures of CNNs and Transformers but of lesser parameter size and complexities. This mini-project will be using the Google Colaboratory services for the technical implementation of the architecture and model assessments. The expected outputs of this miniproject is a detailed report of the experiment and the trained model/s and used modeling scripts.

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