Ear segmentation using Mask R-CNN

Assignment #2

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***Abstract*—Mask R-CNN is currently one of the top performing framework for object detection and segmentation. This report covers its use for ear segmentation on AWE database [1].**

I. Introduction

II. Methodology

AWE dataset comes with bounding boxes and ear masks. For best results with Mask R-CNN, each mask is split according to bounding boxes, so that each mask cntains only a single ear. For faster training, these masks are stored as numpy files on start, and reused on each run. For training and detection, images are scaled to 512px and padded with zeros until square. Model has been trained over 30 epochs and 93 steps (number of images in dataset, divided by)

III. Results

IV. Conclusion

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References

[1] Ž. Emeršič, J. Križaj, V. Štruc, and P. Peer, *Deep Ear Recognition Pipeline*. Cham: Springer International Publishing, 2019, pp. 333–362. [Online]. Available: https://doi.org/10.1007/978-3-030-03000-1_14