

The WildlifeReID-10k dataset was created by using the Python package wildlife-datasets [24] by combining the following datasets [1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], [21], [22], [23], [25], [26], [27], [28], [29], [30], [31].

References

- [1] L. Adam, K. Papafitsoros, C. Jean, and A. Rees. Exploiting facial side similarities to improve ai-driven sea turtle photo-identification systems. *bioRxiv*, pages 2024–09, 2024.
- [2] L. Adam, V. Čermák, K. Papafitsoros, and L. Pícek. Seaturtleid2022: A long-span dataset for reliable sea turtle re-identification. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, pages 7146–7156, January 2024.
- [3] W. Andrew, J. Gao, S. Mullan, N. Campbell, A. W. Dowsey, and T. Burghardt. Visual identification of individual holstein-friesian cattle via deep metric learning. *Computers and Electronics in Agriculture*, 185:106133, 2021.
- [4] W. Andrew, C. Greatwood, and T. Burghardt. Visual localisation and individual identification of holstein friesian cattle via deep learning. In *Proceedings of the IEEE International Conference on Computer Vision Workshops*, pages 2850–2859, 2017.
- [5] W. Andrew, S. Hannuna, N. Campbell, and T. Burghardt. Automatic individual holstein friesian cattle identification via selective local coat pattern matching in RGB-D imagery. In *2016 IEEE International Conference on Image Processing (ICIP)*, pages 484–488. IEEE, 2016.
- [6] J. Bruslund Haurum, A. Karpova, M. Pedersen, S. Hein Bengtson, and T. B. Moeslund. Re-identification of zebrafish using metric learning. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision Workshops*, pages 1–11, 2020.
- [7] DeepMind. Turtle recall: Conservation challenge, 2022.
- [8] N. Dlamini and T. L. van Zyl. Automated identification of individuals in wildlife population using siamese neural networks. In *2020 7th International Conference on Soft Computing & Machine Intelligence (ISCMi)*, pages 224–228. IEEE, 2020.
- [9] A. C. Ferreira, L. R. Silva, F. Renna, H. B. Brandl, J. P. Renoult, D. R. Farine, R. Covas, and C. Doutrelant. Deep learning-based methods for individual recognition in small birds. *Methods in Ecology and Evolution*, 11(9):1072–1085, 2020.
- [10] A. Freytag, E. Rodner, M. Simon, A. Loos, H. S. Kühl, and J. Denzler. Chimpanzee faces in the wild: Log-Euclidean CNNs for predicting identities and attributes of primates. In *German Conference on Pattern Recognition*, pages 51–63. Springer, 2016.
- [11] L. Fu and G. He. Cow dataset, 2021.
- [12] J. Gao, T. Burghardt, W. Andrew, A. W. Dowsey, and N. W. Campbell. Towards self-supervision for video identification of individual holstein-friesian cattle: The Cows2021 dataset. *arXiv preprint arXiv:2105.01938*, 2021.
- [13] Z. He, J. Qian, D. Yan, C. Wang, and Y. Xin. Animal re-identification algorithm for posture diversity. In *ICASSP 2023-2023 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, pages 1–5. IEEE, 2023.
- [14] J. Holmberg, B. Norman, and Z. Arzoumanian. Estimating population size, structure, and residency time for whale sharks *Rhincodon typus* through collaborative photo-identification. *Endangered Species Research*, 7(1):39–53, 2009.

- [15] D. Kern, T. Schiele, U. Klauck, and W. Ingabire. Towards automated chicken monitoring: Dataset and machine learning methods for visual, noninvasive reidentification. *Animals*, 15(1):1, 2024.
- [16] M. Lahiri, C. Tantipathananandh, R. Warungu, D. I. Rubenstein, and T. Y. Berger-Wolf. Biometric animal databases from field photographs: identification of individual zebra in the wild. In *Proceedings of the 1st ACM international conference on multimedia retrieval*, pages 1–8, 2011.
- [17] S. Li, J. Li, H. Tang, R. Qian, and W. Lin. ATRW: A Benchmark for Amur Tiger Re-identification in the Wild. In *Proceedings of the 28th ACM International Conference on Multimedia*, page 2590–2598. Association for Computing Machinery, 2020.
- [18] T.-Y. Lin. Cat individual images, 2020.
- [19] V. Miele, G. Dussert, B. Spataro, S. Chamailé-Jammes, D. Allainé, and C. Bonenfant. Re-visiting animal photo-identification using deep metric learning and network analysis. *Methods in Ecology and Evolution*, 12(5):863–873, 2021.
- [20] G. Mougeot, D. Li, and S. Jia. A deep learning approach for dog face verification and recognition. In *PRICAI 2019: Trends in Artificial Intelligence: 16th Pacific Rim International Conference on Artificial Intelligence, Cuvu, Yanuca Island, Fiji, August 26-30, 2019, Proceedings, Part III 16*, pages 418–430. Springer, 2019.
- [21] E. Nepovinnikh, T. Eerola, V. Biard, P. Mutka, M. Niemi, M. Kunnasranta, and H. Kälviäinen. Seapid: Saimaa ringed seal re-identification dataset. *Sensors*, 22(19):7602, 2022.
- [22] J. R. Parham, J. Crall, C. Stewart, T. Berger-Wolf, and D. Rubenstein. Animal population censusing at scale with citizen science and photographic identification. In *2017 AAAI Spring Symposium Series*, 2017.
- [23] C. Trotter, G. Atkinson, M. Sharpe, K. Richardson, A. S. McGough, N. Wright, B. Burville, and P. Berggren. NDD20: A large-scale few-shot dolphin dataset for coarse and fine-grained categorisation. *arXiv preprint arXiv:2005.13359*, 2020.
- [24] V. Čermák, L. Pícek, L. Adam, and K. Papafitsoros. WildlifeDatasets: An Open-Source Toolkit for Animal Re-Identification. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, pages 5953–5963, 2024.
- [25] O. Wahltinez and S. J. Wahltinez. An open-source general purpose machine learning framework for individual animal re-identification using few-shot learning. *Methods in Ecology and Evolution*, 15(2):373–387, 2024.
- [26] L. Wang, R. Ding, Y. Zhai, Q. Zhang, W. Tang, N. Zheng, and G. Hua. Giant panda identification. *IEEE Transactions on Image Processing*, 30:2837–2849, 2021.
- [27] WildMe. Beluga ID 2022, 2022.
- [28] WildMe. Leopard ID 2022, 2022.
- [29] P. Yu, T. Burghardt, A. W. Dowsey, and N. W. Campbell. Multicamcows2024—a multi-view image dataset for ai-driven holstein-friesian cattle re-identification on a working farm. *arXiv preprint arXiv:2410.12695*, 2024.
- [30] M. Zuerl, R. Dirauf, F. Koefler, N. Steinlein, J. Sueskind, D. Zanca, I. Brehm, L. v. Fersen, and B. Eskofier. Polarbearvidid: A video-based re-identification benchmark dataset for polar bears. *Animals*, 13(5):801, 2023.

- [31] S. Zuffi, A. Kanazawa, T. Berger-Wolf, and M. J. Black. Three-D safari: Learning to estimate zebra pose, shape, and texture from images "In the wild". In *Proceedings of the IEEE/CVF International Conference on Computer Vision*, pages 5359–5368, 2019.