

REFERENCES

- [1] S. Agarwal, H. Farid, T. El-Gaaly, and S. N. Lim, "Detecting Deep Fake Videos from Appearance and Behavior," in 2020 IEEE International Workshop on Information Forensics and Security, WIFS 2020, Institute of Electrical and Electronics Engineers Inc., Dec. 2020. doi: 10.1109/WIFS49906.2020.9360904.
- [2] L. Ding, Z. Raziei, E. C. Larson, E. V. Olinick, P. Krueger, and M. Hahsler, "Swapped face detection using deep learning and subjective assessment," *EURASIP Journal on Information Security*, vol. 2020, pp. 1–12, 2020.
- [3] S. Tariq, S. Lee, and S. S. Woo, "One Detector to Rule Them All: Towards a General Deepfake Attack Detection Framework," arXiv:2105.00187, 2021. [Online]. Available: <https://arxiv.org/abs/2105.00187>.
- [4] P. Saikia, D. Dholaria, P. Yadav, V. Patel, and M. Roy, "A Hybrid CNN-LSTM model for Video Deepfake Detection by Leveraging Optical Flow Features," arXiv:2208.00788, 2022. [Online]. Available: <https://arxiv.org/abs/2208.00788>.
- [5] Rossler, A., Cozzolino, D., Verdoliva, L., Riess, C., Thies, J., and Nießner, M. (2019). FaceForensics++: Learning to Detect Manipulated Facial Images. In Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2019.
- [6] Foresti, G. L., Fusiello, A., and Hancock, E. (Eds.). (2023). 22nd International Conference, ICIAP 2023, Udine, Italy, September 11–15, 2023, Proceedings, Part II. Lecture Notes in Computer Science. Springer. <https://doi.org/10.1007/978-3-031-43153-1>.
- [7] Perez, L., and Wang, J., "The Effectiveness of Data Augmentation in Image Classification Using Deep Learning", arXiv preprint arXiv:1712.04621, 2017
- [8] D. E. King, "Dlib-ml: A machine learning toolkit," *The Journal of Machine Learning Research*, vol. 10, pp. 1755–1758, 2009.
- [9] Liu, Z., Lin, Y., Cao, Y., Hu, H., Wei, Y., Zhang, Z., and Feng, J., "Swin Transformer: Hierarchical Vision Transformer using Shifted Windows," in Proc. IEEE/CVF Int. Conf. Computer Vision (ICCV), 2021, pp. 10012-10022.
- [10] Qadir, A., Mahum, R., El-Meligy, M.A., Ragab, A.E., AlSalman, A., and Awais, M. (2024). An efficient deepfake video detection using robust deep learning. *Heliyon*, 10, e25757.
- [11] I. Amerini and R. Caldelli, "Exploiting Prediction Error Inconsistencies through LSTM-based Classifiers to Detect Deepfake Videos," in Proceedings of the 2020 ACM

Workshop on Information Hiding and Multimedia Security (IH and MMSec '20), Denver, CO, USA, 2020, pp. 97–102. doi: 10.1145/3369412.3395070.

[12] Vaswani, A., Shazeer, N., Parmar, N., Uszkoreit, J., Jones, L., Gomez, A. N., Kaiser, Ł., and Polosukhin, I. (2017). Attention is all you need. *Advances in Neural Information Processing Systems*, 30.

[13] Bahdanau, D., Cho, K., and Bengio, Y. (2015). Neural machine translation by jointly learning to align and translate. *arXiv preprint arXiv:1409.0473*.

<https://arxiv.org/abs/1409.0473>

[14] L. Y. Gong, X. J. Li, and P. H. J. Chong, "Swin-Fake: A Consistency Learning Transformer-Based Deepfake Video Detector," *Electronics*, vol. 13, no. 15, p. 3045, 2024.

[15] M. S. Saealal, M. Z. Ibrahim, D. J. Mulvaney, M. I. Shapiai, and N. Fadilah, "Using cascade CNN-LSTM-FCNs to identify AI-altered video based on eye state sequence," *PLOS ONE*, vol. 17, no. 12, pp. 1–23, Dec. 2022. doi: 10.1371/journal.pone.0278989.

[16] M. Schuster and K. K. Paliwal, "Bidirectional recurrent neural networks," *IEEE Transactions on Signal Processing*, vol. 45, no. 11, pp. 2673–2681, 1997.

[17] B. Sun, Z. Xu, Z. Wu and S. Zhang, "SwinFMCW: A Joint Swin Transformer and LSTM Method for Gesture and Identity Recognition Using FMCW Radar," *2022 Cross Strait Radio Science and Wireless Technology Conference (CSRSWTC)*, Haidian, China, 2022, pp. 1-3, doi: 10.1109/CSRSWTC56224.2022.10098436.

[18] O. Tantawy and A. Elshafee, "Advancements in Deepfake Detection: Leveraging Bi-LSTM-CNN Architecture for Robust Identification," in *2024 6th Novel Intelligent and Leading Emerging Sciences Conference (NILES)*, 2024, pp. 525–528, doi: 10.1109/NILES63360.2024.10753235