

BATCH NO-3 LITERATURE SURVEY

S.No	TITLE & AUTHOR	JOURNAL & YEAR	PROBLEM	SOLUTION	PARAMETER MEASURED	ADVANTAGES	DISADVANTAGES
1	Salienc-Aware Face Presentation Attack Detection via Deep Reinforcement Learning - Bingyao Yu, Jiwen Lu, Xiu Li, Jie Zhou.	IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY, VOL. 17, 2022	Face spoofing detection, replay attack, print attack detection..	They propose salienc-aware face presentation attack detection (SAFPAD) approach, which takes advantage of deep reinforcement learning to exploit the salient local part information in face images.	Ablation Study, Cross-Dataset Testing, Salient Local Patches Number, Salient Local Patches Size	Usage of Reinforcement learning makes the FAS more efficient.	This approach needs to be improved in the generalization capability for the complicated face presentation attack detection application conditions.
2	DRL-FAS: A Novel Framework Based on Deep Reinforcement Learning for Face Anti-Spoofing - Rizhao Cai, Haoliang Li	IEEE TRANSACTIONS ON INFORMATION FORENSICS AND SECURITY, VOL. 16, 2021	Face spoofing detection, replay attack, detection..	Reliable Face Anti-Spoofing (FAS) techniques are highly desired and essential for developing secure face recognition systems.	we particularly employ a Gated Recurrent Unit (GRU [27]) to learn local features from f_1, f_2, \dots, f_t in a sequential and recursive manner. The reason is that the hidden state h_t of the GRU can be learned from h_{t-1} and f_{t-1} : $W\{z, q, h\}$, $U\{z, q, h\}$, and $b\{z, q, h\}$ are parameters of the GRU.	While many of the previous works used RNN to leverage temporal information from video frames, we take advantage of RNN to memory information from all "observations" from sub-patches to reinforce extracted local features gradually.	The Computation of this FAS is slow due the usage of Recurrent Neural Network (RNN).

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3	Factors Related To The Improvement of Face Anti-Spoofing Detection Techniques With CNN Classifier - Ms. Sonali R. Chavan, Dr. Swati S. Sherekar, Dr. Vilas M. Thakre.	2021 International Conference on Computational Intelligence and Computing Applications.	Face spoofing detection and replay attack detection.	This paper adopted comprehensive presentation of proposed Anti-spoofing techniques followed by features, datasets, parameters.	HTER, ACER, ACPER, BPCER, EER, EPR, FNR	Using datasets as benchmarks have been extensively compared with different types of Face Spoofing detection techniques using common CNN based algorithm and evaluation metrics. This comparative evaluation figure out which types of approaches are most effective, depending on the type of Face Spoofing attack	Although many researchers have put their efforts to develop face detection systems but it fails to give adequate results in all situation.
4	Spoof Face Detection Via Semi-Supervised Adversarial Training - Chengwei Chen, Yaping Jing, Xuequan Lu.	2022 International Joint Conference on Neural Networks (IJCNN) 978-1-7281-8671-9/22/\$31.00 ©2022 IEEE DOI: 10.1109/IJCNN55064.2022.989275	Face spoofing detection and print attack detection.	In this paper, we propose a semi-supervised adversarial learning framework for spoof face detection, which largely relaxes the supervision condition.	Weighting parameter, Adversarial loss, Image reconstruction loss, Maximum Mean Discrepancy.	Our approach does not need spoofing face data for training, and is thus semi-supervised and robust to different types of spoof faces.	The cross database experiments may cause errors in big scale.

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5	Face Anti-spoofing Based on Image Block Difference and Logistic Regression Analysis -	2015 IEEE 5th International Conference on Consumer Electronics Berlin (ICCE-Berlin)	Face spoofing detection and replay attack detection.	This paper presents an efficient anti-spoofing approach that can detect whether the face in front of the camera is genuine or fake. The proposed method uses the difference between pairwise discrete cosine transform coefficients and logistic regression as a machine learning algorithm.	Feature extraction (HBD, VBD, HVBD), Scrambling.	The proposed anti-spoofing method is very simple, but the results of initial evaluations demonstrated its good performance on a slightly modified face anti-spoofing database.	The cross database experiments may cause errors in big scale.
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