Insight on face liveness detection: a systematic literature review

ABSTRACT

To review researcher's attempts in response to the problem of spoofing and liveness detection, mapping the research overview from the literature survey into a suitable taxonomy, exploring the basic properties of the field, motivation of using liveness detection methods in face recognition, and Problems that may restrain the advantages. We presented a subjected search on face recognition with liveness detection and its synonyms in four main databases: Web of science, Science Direct, Scopus and IEEE Xplore. We believe that these databases are widely inclusive enough to cover the literature. The final number of articles considered is 65 articles. 4 of them where review and survey articles that described a general overview about liveness detection and anti-spoofing methods. Since 2012, and despite of leaving some areas unestablished and needs more attention, researchers tried to keep track of liveness detection in several ways. No matter what their category is, articles concentrated on challenges that faces the full utility of anti-spoofing methods and recommended some solutions to overcome these challenges. In this paper, different types of liveness detection and face anti-spoofing techniques are investigated to keep researchers updated with what is being developed in this field