View Review

Paper ID

2632

Paper Title

FC-MoE: Flip Consistent Mixture of Experts for Unified Face Attack Detection

REVIEW QUESTIONS

1. How confident are you in your evaluation of this paper?

Confident

2. Importance/relevance to ICME

Of sufficient interest

3. Justification for importance/relevance

The automated face recognition (AFR) system of this article is widely used in various scenarios, such as security monitoring, access control, and smart devices. However, with the continuous evolution of attack techniques, existing single-category attack detection methods are difficult to cope with the joint detection of multiple attack methods.

4. Novelty/originality

Moderate Original

5. Justification for novelty/originality

This paper proposes the FC-MoE detector to solve the problem of unified face attack detection

6. Technical correctness

Probably Correct

7. Justification for technical correctness

The research content of this problem includes how to segment the feature space through the sparse mixture of experts (MoE) mechanism and introduce a self-supervised loss function to enhance the generalization ability and application efficiency of the model.

8. Experimental validation and reproducibility

Sufficient validation/theoretical paper

9. Justification for experimental validation and reproducibility

Experiments are conducted on the GrandFake and MS-UFAD datasets, which contain adversarial attacks, digital manipulation attacks, and spoofing attacks.

10. Clarity of presentation

Clear Enough

11. Justification for clarity of presentation

Enough

12. Reference to prior work

References Adequate

13. Justification for references

Enough

14. Overall evaluation of the paper

Weak Accept

15. Justification for overall evaluation (required)

This paper first applies the sparse mixture of experts mechanism to the unified face attack detection task. By introducing the flip consistency loss function, the FC-MoE detector significantly improves the generalization ability and application efficiency of the model while maintaining high efficiency. Experimental results show that FC-MoE performs well in the detection of multiple attack categories and has high practical value.

18. Is this an award-quality paper? (Only for Definite Accept papers)

Weak candidate for award