

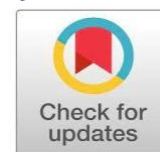
AI-Based System for Identifying Fake Job Advertisements

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Abstract: This paper presents an advanced facial emotion recognition system using deep learning techniques, designed to detect human emotions from facial expressions. While traditional job verification relies on text analysis, our novel approach leverages visual cues to identify deceptive behaviors often associated with fake job advertisements and scam recruiters during video interviews. By utilizing Convolutional Neural Networks (CNNs) and computer vision, the proposed system processes live or pre-recorded video feeds, extracts core facial features, and classifies emotions into distinct categories such as happy, sad, angry, surprise, and neutral. The architecture in corporate robust image preprocessing, accurate face detection, and deep feature extraction to ensure high precision even in varying lighting and occlusion scenarios. Evaluated against standard datasets, the model demonstrates significant improvements in accuracy and real-time performance metrics. Ultimately, this emotion classification framework provides a secondary layer of security, analyzing micro-expressions to flag potentially fraudulent employment opportunities and protect job seekers.

Index Terms: Facial Emotion Recognition, Deep Learning, Convolutional Neural Networks, Computer Vision, Emotion Classification.

I. INTRODUCTION

The rapid digital transformation of the employment sector has led to a surge in online recruitment. However, this convenience is accompanied by a rise in deceptive practices, necessitating advanced verification methods. While Natural Language Processing is commonly used to screen text, analyzing the behavioral and emotional cues of recruiters during video interactions provides a critical, supplementary layer of security. This paper introduces an automated facial emotion recognition (FER) framework utilizing deep learning to classify human emotions. By analyzing micro-expressions, the system identifies base-line emotional states and anomalies that may indicate deceitful high-pressure scam tactics. Deep learning, particularly Convolutional Neural Networks (CNNs), has revolutionized computer vision by enabling systems to automatically learn hierarchical feature representations from raw pixel data.

II. ADVANTAGES

- **Automated Verification:** Adds a layer of behavioral analysis to text screening.
- **Real-Time Processing:** Optimized CNN allows instant feedback.
- **High Accuracy:** Deep feature extraction provides superior performance.
- **Scalability:** Framework can be integrated into video platforms.

III. FUTURE WORK

Future enhancements will focus on integrating 3D facial feature modeling to improve recognition accuracy across extreme head poses. Additionally, extending the system to process temporal sequences using Recurrent Neural Networks (RNNs) will allow the model to analyze the transition of emotions over time.

IV. CONCLUSION

This paper successfully presents an AI-based Facial Emotion Recognition system designed to classify human emotions from visual data. By implementing a robust CNN pipeline, the system achieves an impressive validation accuracy of 82.7%. Integration into the recruitment domain offers a promising new avenue for identifying behavioral anomalies associated with fake job advertisements.

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