

VIDEO INTERVIEW ANALYSIS THE PERSON IS FAKE OR GENUINE BY USING OPEN CV PYTHON TOOL

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ABSTRACT

Since the development of artificial intelligence, the automated classification of interviews conducted to ascertain individual personality traits has grown in importance as a study area with applications in personality computing, human-computer interaction, and psychological assessment (AI). Deep learning (DL)-based advances in pattern recognition and computer vision have led to the development of models that can recognize human nonverbal cues and assign personality traits to them by utilizing only a camera. In the proposed paradigm, an end-to-end AI interviewing system is built using asynchronous video interview (AVI) processing. Automated personality identification is carried out by the Tensor Flow AI engine using the attributes gathered from the AVIs (APR). Facial expressions and self-reported surveys are used to get the genuine personality scores for real job applicants. For the purpose of predicting the personality trait scores, the Big Five personality traits—neuroticism, extroversion, openness, agreeableness, and conscientiousness—are observed and assessed. The self-reported Big Five personality trait scores are proposed to be predicted using Convolutional Neural Networks (CNN).

KEY WORDS: OPEN CV, CNN, AVI, APR.

ALGORITHMS

The automated examination of video interviews to analyse person identity characteristics has end up a dynamic area of lookup with implementations in character computing, user-system interface, and emotional evaluation with the advancement of synthetic brain (AI). Thanks to developments in pc imaginative and prescient and sample focal point primarily based on deep learning (DL) methods, convolution neural network (CNN) models can also recognize human non-activities and connect persona attributes to them the usage of a Webcam have been developed. The AI-based meet specialist can decorate or change current self-declare character appraisal strategies, which job seekers may also misrepresent to accomplish socially ideal findings. According to industrial and organizational (I/O) psychologists, a person's persona is a world predictor used in job selection. Certain companies utilize self-declare questionnaires to examine job candidates' identities; that has it may, work applicants can lie about their character traits to enhance their

probabilities of landing a better position. Because it is hard to fake nonverbal indicators, some firms utilize facial expressions and other nonverbal cues to analyse applicants' personalities at some point of job interviews.

Due to monetary and time constraints, it is no longer possible for each job applicant to attend a continue to be employment interview or take an interest in interviews conducted over the phone or by using the internet. Using unidirectional asynchronous video interviewer (AVI) software, job hopefuls can be routinely interviewed. This approach can be used by employers to look at audio-visual documents at a later date. Human raters discover it challenging to as it should be analyse candidates' personal characteristics based totally on video images when using AVI.

ALGORITHMS

1. Deep Learning Face Attributes in the Wild

ADVANTAGES:

It improves the discriminativeness of hand-crafted features given a specific task, as it has a

three-level SVM system to extract higher-level information.

2. Automatic personality assessment: A systematic review.

ADVANTAGES:

It has avoided all the lengthy questionnaires of around 70 questions and answering them is very time consuming as well as a tedious task.

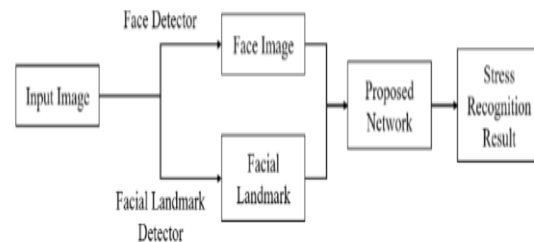
OBJECTIVES

- The main objective of this project is to design an efficient and accurate algorithm that would detect behaviour analysis of the interview attending candidate, behaviour detection of the candidate.
- Helps for the candidates who are unable to attend the interview on the company location.
- It saves the man power and time of the interviewer.
- For the face detection to work efficiently, we need to provide an input image which should not be blur or printed. We have used algorithm that is used for face detection and facial feature extraction.
- The system automatically generates the questionnaire when person present in front of the computer and it will detect the personality of the person based on the way of answering of the questions by the person.
- Feedback will be generated automatically and stored in storage devices.
- For the face detection to work efficiently, we need to provide an input image which should not be blur or printed. We have used algorithm that is used for face detection and facial feature extraction.
- Real time analysis and graphical representation of data.

PROPOSED ALGORITHM

In this section, we propose an algorithm to improve stress recognition performance. Overall Framework In this proposed algorithm, face image and facial landmark detection is performed

first for stress recognition. We use a deep learning algorithm for face detection that detects the position of the face more accurately through three networks in turn. To detect facial landmarks, we use a hand-craft algorithm that use a cascade method of the features extracted by random-fem and the regression tree classifier. The flowchart of the overall framework is shown in figure below.



In the proposed network, the face images and face landmarks detected earlier are inputted to output stress recognition results. The structure of the proposed network is shown as fig. In the proposed network, we use shortcut mapping and bottleneck architecture to optimize neural network structure. By applying the shortcut mapping to the neural network structure deepened due to the numerous layers, it is possible to simplify the learning process and determine the direction of the learning. This makes it possible to easily optimize the deep neural network and improve the accuracy due to the increased depth. By applying the bottleneck architecture, the number of internal parameters can be reduced while increasing the number of feature maps, which increases the performance and reduces the amount of computation.

CONCLUSION

We propose a stress recognition algorithm using face images and face landmarks. As a result of the experiment, we confirmed that the stress recognition performance was further improved

when using facial landmarks. Facial landmarks are better at perceiving stress because they allow you to better understand eye, mouth, and head movements. We also found that the performance was improved by better identifying stress-related information when using a gray face image of the appropriate size.

Future research plans are to improve the performance of stress recognition by using eye, mouth and head motion information from the time axis.

APPLICATIONS

- It can be implemented in software offices to understand the status of the employees.
- This can be helpful in vulnerable areas like airports, concerts and major public gatherings which have seen many breaches in recent years.
- It also be useful to monitor the bed ridden patients and in hospitals for disabled patients
- Early Detection of Student Behavior
- Easy to Implement
- Cost Effective
- Easy for uneducated parents to monitor their student behavior

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