

Automatic Personality Recognition used in Asynchronous Videos

Nithya D M¹, Rakshith N J², Rohan K U³, Sneha C R⁴, Prof. Vimala Devi. R⁵

Final Year Student, Department of Information Science and Engineering^{1,2,3,4}

Assistant Professor, Department of Information Science and Engineering⁵

S J C Institute of Technology, Chikkaballapur, India

Abstract: *With the use of artificial intelligence (AI), the automatic recognition of individual has become an active area of research. And it has a wide application in personality computing, human-computer interaction, and psychological assessment. Advances in computer vision and pattern recognition based on deep learning (DL) techniques have led to the establishment of convolution neural network (CNN) models that can successfully recognize human nonverbal cues and attribute their personality traits with the use of a camera. In this study, an end-to-end Artificial Intelligence interviewing system was developed using asynchronous video interview (AVI) processing and a TensorFlow AI engine to perform automatic personality recognition (APR) based on the features extracted from the Automatic video Interviews and the true personality scores from the facial expressions and self-reported questionnaires of real job applicants.*

Keywords: Big five, Convolutional Neural Network (CNN), Personality Computing, TensorFlow.

REFERENCES

- [1]. Sun A, Li Y, Lu G, 2018, "Facial expression recognition using optimized active regions", *Hum-Centric Comput Inf Sci* 8:33.
- [2]. McLarnon M. J. W and T. J. Schneider, 2019, "Faking it! Individual differences in types and degrees of faking behavior," *pp.* 88–95.
- [3]. Asabere N. Y and M. B. Michael, 2018, "Improving-socially-aware commendation accuracy through personality," *pp.* 351–361.
- [4]. O. Celiktutan and H. Gunes, 2017, "Automatic prediction of impressions in time and across varying context: personality, attractiveness and likeability," *pp.* 29–42.
- [5]. F. S. Brenner, T. M. Ortner, and D. Fay, 2016, "Asynchronous video interviewing as a new technology in personnel selection: the applicant's point of view," *pp.* 1–11.
- [6]. M. I. Jordan and T. M. Mitchell, 2015, "Machine learning: trends, perspectives, and prospects," *pp.* 255–260.
- [7]. R. Petrican, A. Todorov, and C. Grady, "Personality at face value: facial appearance predicts self and other personality judgments among strangers and spouses," *J. Nonverbal Behavior*, vol. 38, no. 2, *pp.* 259–277, Jan. 2014.
- [8]. S. Nestler and M. D. Back, 2013, "Applications and extensions of the lens model to understand interpersonal judgments at zero acquaintance," *pp.* 374– 379.
- [9]. "Escalante HJ, Junior JJ, 2018, "Explaining first impressions: modeling, recognizing, and explaining with the advent of artificial intelligence (AI) apparent personality from videos". arXiv preprint arXiv :18020 0745. "
- [10]. "Sun A, Li Y, Lu G, 2018, "Facial expression recognition using optimized active regions", *Hum-Centric Comput Inf Sci* 8:33.