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**AI-BASED APPROACH FOR ASSESSING PARTICIPANT'S PERSONALITY AND  
NON-VERBAL CUES THROUGH VIDEO INTERVIEW ANALYSIS.**

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**Introduction.** Nowadays companies receive a huge amount of applications when there is a job opening within these companies. Reviewing, analyzing, and evaluating each application is considered a very hard and time-consuming task. So here comes the need for an artificial intelligence tool that can help in the process of assessing these applications and can nominate a group of them for the job position. In this paper, we introduce our proposed approach for assessing a participant's potential to work in the sales field by analyzing their video interview and estimating their personality traits using the OCEAN model [1][2]. We present our approach to solving this task and the benchmark model we established. We introduce our new approach to collecting the dataset while talking about the previous pipeline we established to gather the video interviews. We demonstrate the results we achieved on the collected dataset and shed light on expanding the features considered in the assessment process to enhance the results. We talk about our plan to expand and generalize the model.

**Main part.** Our purpose is to present the benchmark model for assessing personality traits and using them to evaluate participant's potential to work in sales. We demonstrate the results we achieved on the collected dataset. We also show our research about expanding and enhancing the approach for assessing the heritability of the participants by taking more features (e.g. Body Language, Prosody, Gaze Behavior, Facial Expressions, Verbal Fluency) into consideration. We study the correlations between multiple nonverbal cues and how they correlate with the final decision of the recruiters. We will present our new approach that builds on the benchmark model and utilizes the most correlated features to make more robust and valid evaluations.

**Conclusions.** The predicted results concentrated on providing comprehensive research showing the relation between the nonverbal traits and their correlation with the hierarchy. We will present an approach that utilizes this knowledge to build a system to help recruiters find the right candidates for the job position and evaluate important soft skills. We will show our results on an available dataset with real video interviews.

**List of sources used**

1. McCrae R. R., John O. P. An Introduction to the Five-Factor Model and Its Applications // Journal of Personality. — 1992. — Vol. 60, no. 2. — P. 175–215. — DOI: <https://doi.org/10.1111/j.1467-6494.1992.tb00970.x>. — URL: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-6494.1992.tb00970.x>.
2. Effects of personality traits on visitors attending an exposition: the moderating role of anxiety attachment / M. J. Kim [et al.] // Asia Pacific Journal of Tourism Research. — 2018. — May. — DOI: 10.1080/10941665.2018.1468346.