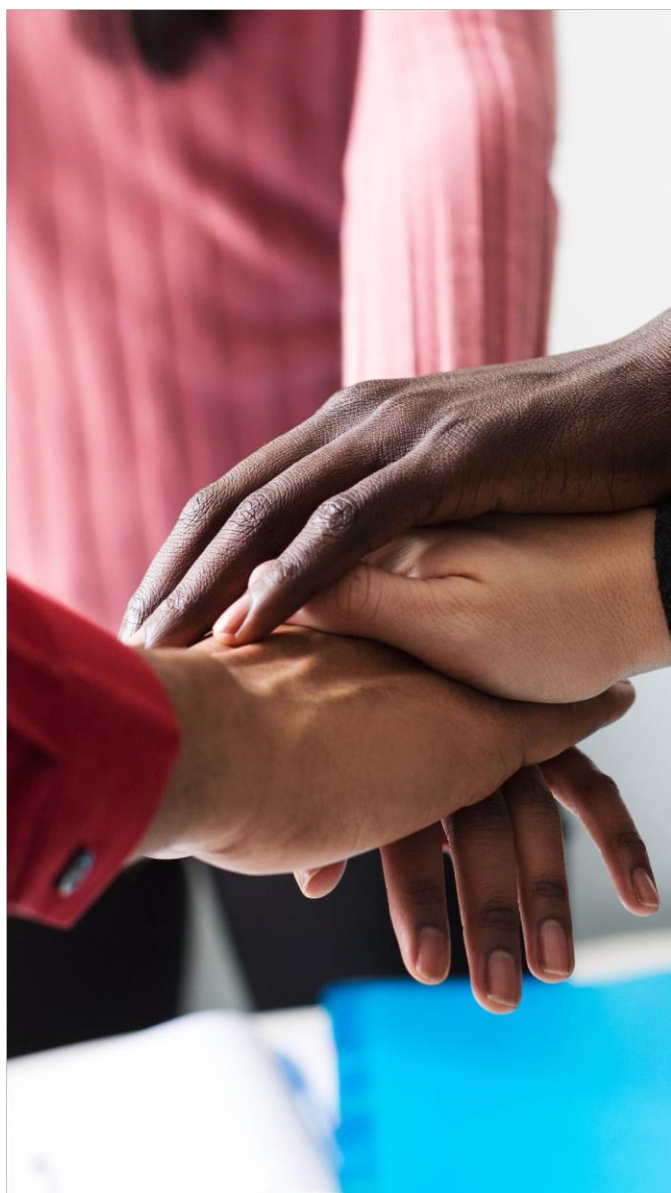




AI | TALENT | CULTURE

Accessibility Accommodations

The current document examines issue related to the assessment of candidates with a dotin tools for a purpose of recruiting. Conditions which require additional assistance, skip some test parts or usage of alternative instruments instead of Dotin tool are listed, and potential sources of bias are discussed.



PRINCIPLE OF DOTIN TOOL FUNCTION

Dotin tool works similar to projective tests such as well-known Rorschach inkblot test, meaning that one participates in a task unrelated to psychological features being measured, however received answers may be used to approximate these features. For candidate is unaware of how his/her psychological qualities related to potential professional performance are estimated, he/she cannot “cheat” in order to influence results. During the Dotin examination a candidate is presented with some images or color matrices to choose the most pleasant ones from the list or is asked to share his/her preferences (upload favorite music or pictures from internet).

Our previous studies with large samples allowed to define relations between answers in this tasks and some psychological qualities important to predict potential successfulness of certain candidate using machine learning techniques. These algorithms are used to restore psychological data from data on candidates’ preferences. In parallel an uploaded

CV is being processed with semantic analysis engine in order to extract data on hard and soft skills and match them to certain occupations.

INDIVIDUAL DIFFERENCES AS A SOURCE OF BIAS

As it follows from above written, testing with Dotin tool may be performed without physical presence of candidate and without personal contact with HR manager which can completely sort out recruiter’s bias related to his/her personal impression of candidate. The result of assessment will be predicted score of candidate’s fit to certain occupation.

However, do the testing procedure or scoring themselves bring any bias?

- Gender? Due to multiple proven psychological gender differences the gender factor should not be ignored. So different models are used for men and women for more precise approximation of psychological factors of interest (i.e., personality, occupational preferences). Though, it does not lead to artificial restrictions for possible minimum and maximum on any scale used to estimate occupational fit are the same for men and women.
- Age? Information about candidate's age is also being used for the best possible approximation of psychological traits and does not directly influence occupation fit. While some age-related skills or qualities may matter (e.g., older people are less likely to feel free with computer/smartphone interfaces or younger people are more likely to use modern slang in CV which may be poorly recognized), age itself does not.
- Race, nationality, culture, religion? No information about race and nationality is currently being used in Dotin models, so there is no source of bias. The same is true for culture and religion with the exception of the cases candidates are unable to do some tasks (e.g., upload favorite music or images) related to test due to cultural or religious restrictions.* These cases are subjects to more traditional estimations such as paper-and-pencil tests or interviewing. It is logical to assume that non-native English speakers may include some ambiguous or linguistically incorrect statements in the CV which will be processed worse. The same would be true for people from countries with specific English (neither British, nor American). However, in these cases the source of potential poorer performance of CV engine is by to English writing levels, not to racial or national variables themselves. In future this problem may be solved by appropriate localization of the models.

* Note: partial restrictions (e.g., for human-related images) are also the cases for inability of person to use them distorts assessment results; personal moral restrictions should not be considered as contraindications to test, only ones external to candidate's personality are the cases.

DISABILITIES DETERIORATING TEST UNDERGOING

Below there is a list of medical conditions we assume to make some assessment parts impossible or to distort results of whole assessment or it's certain parts.

Condition	Part of assessment
Extremely low intelligence	Full test
Psychotic disorders (acute)	Full test
Blindness or extremely weak vision	Full test
Motor disorders excluding both hands function	Full test

Extreme color blindness	Color matrices, color-based model in images tests
Agnosia (inability to identify certain object categories)	Tag-based model in images tests
Serious dysgraphia (writing disruption), dyslexia (reading/speaking disruption)	CV block

Other conditions including motor dysfunctions which do not prevent candidate from accurate movements of at least one hand, and non-extreme color blindness (which is not evident without special medical examination) do not influence assessment results.