

Personnel Psychology Call for Research on Artificial Intelligence and Machine Learning Applications in Personnel Selection/Staffing

We are soliciting research reports on work in the area of artificial intelligence (AI) and machine learning (ML) in personnel selection/staffing for potential publication in *Personnel Psychology*.

This document outlines a process by which we are hoping to bring together those who do work in this area in a practical setting. For regular full article submissions to the special issue, please see the journal website [here](#).

Reason for Contacting You: We thought you or your organization may be doing research in this domain, but you might not know about this opportunity to receive recognition for your work. You also might not normally be involved in publishing and realize the call applies to you.

Research Sought for the Call: AI and ML is unquestionably one of the biggest influences on our science and practice in current times. This call is specifically focused on research that uses AI and ML in the domain of personnel selection/staffing including, for example, new testing and assessment methods, reliability and validity of such procedures, interviewing, recruitment methods, detecting and remediating adverse impact, interpretability of algorithms for managers and candidates, avoiding capitalization on chance and “dustbowl empiricism,” and other topics. The guest editors believe that some of the most advanced work being conducted currently using AI and ML are by Industrial and Organizational Psychologists in field settings developing staffing systems. As an area where practice is leading the science, we can significantly advance our literature by drawing out lessons from early applications to practice being conducted by researchers such as you. Our interest is primarily in data from operational selection contexts in organizations. The link to the call is here: <https://onlinelibrary.wiley.com/pb-assets/assets/17446570/A%20PPpsych%20Special%20Issue%20Call-1595534387287.pdf>.

We realize you may not be in an academic setting or may not think about publishing as a potential outcome of your work or want to spend the time and effort usually required. This call is designed to make your participation easy, as described below. Please also forward this message to others in your network who might be interested.

Benefits to You: Participation in this call will offer exposure and recognition of your advanced research to the scientific community. This should help ensure or improve the credibility of your work to managers, employees, and customers as to the effectiveness and fairness of staffing systems based on AI and ML techniques. This is especially important at this stage of the science, given the unfavorable press such advancements sometimes receive in popular press. Moreover, it will establish you as one of the leaders in this area.

How to Participate: We have conceived of a method that is no cost and low effort on your part. It is inspired somewhat by how the field rapidly advanced research on personnel selection in the 1950s called the Validity Information Exchange in *Personnel Psychology*. It allowed early pioneers to publish short summaries of their studies, consisting of brief descriptions of methods and results in just a few pages. This allowed our field to accumulate knowledge and create a scientific foundation on the emerging practice of personnel selection quite quickly. This advanced our field at an important time in its development when basic information on the value of our work had to be established and communicated. We believe we are at a similar stage of rapid evolution now because AI and ML will likely reinvent personnel selection techniques. People like you may be the early pioneers now.

To make participation easy, we have developed a template for researchers to report just the basic information on their research, much like the Validity Information Exchange. The template is described below.

Depending on how many submissions are received, we will compile the contributions into one or more feature length articles, perhaps based on thematic topics. You will serve as a coauthor of an article and receive detailed feedback from a special issue board who will help you develop the full paper.

In order to participate, we ask you to agree to the following conditions to ensure the scientific integrity of the process:

1. Agree that your submission will not be advertising, with only selected findings highlighted, but instead provide honest and full reporting that will be scientifically credible.

2. Agree to report both more and less successful attempts at using AI and ML to develop personnel selection procedures, so the scientific community is not misinformed and future meta-analyses are not biased. Having highly supportive results are not necessary or sufficient to participate. Our goal is to advance knowledge and we can learn from both successful and unsuccessful attempts. For example, an organization might report on all their complete AI/ML projects or a sampling of both their most and least successful.

3. Agree to undergo peer review of your submission, which will likely require revisions (such as providing additional information and clarifications) and your submission may not be ultimately accepted. Along with the regular editorial board, a special editorial board has come together for this purpose made up of practitioners and academics heavily involved in practice who have done leading edge work themselves in AI and ML. Their goal will be to provide peer review, but also to help you craft a successful submission. See the members of the board [at this link](#):

Timeframe: Manuscripts must be submitted between August 1-31, 2021.

Further Questions: Please direct questions to the special issue guest editors: Michael A. Campion (campionm@purdue.edu) and Emily D. Campion (ecampion@odu.edu).

Importantly, the guest editors are available to work with you to help develop your submission in advance of the deadline. So if you are thinking about submitting, but are unsure whether your research would be appropriate or have other hesitations, please contact us.

There will also be a session at the 2021 SIOP Conference on April 16 (3:30-4:45 Eastern Time) with the special editorial board to discuss the special issue and answer questions. See the link to the conference here: <https://www.siop.org/Annual-Conference>.

Template:

1. Names of the researchers and affiliated organizations.
2. Brief description of the selection procedure.
3. Intended uses of the selection procedure.
4. Statement of what the procedure is intended to assess (e.g., knowledge, skill, ability, personality trait, other psychological characteristic, work experience, education, or other background, or other types of information on candidates).
5. Setting and sample (including type of organization, industry, jobs, sample sizes, any unique or relevant aspects of the setting, etc.).
6. Type of artificial intelligence or machine learning software and analytics used. All types of software and advanced analytics are accepted, from all relevant fields of research, if they push the boundaries of what would be considered the normal analytic techniques in personnel selection.
7. Brief summary of the raw data input to the computer model.
8. Output of the model (e.g., scores or other information), including interpretation for selection decision making.
9. Brief description of the development of the model (e.g., steps, model supervision, revisions, cross validation and other approaches to preventing capitalization on chance, etc.).
10. Descriptive statistics (e.g., n's, means, standard deviations, ranges, and intercorrelations, inclusive of all relevant variables).
11. Evidence of reliability (with the type of evidence depending on the application).
12. Evidence of criterion-related validity. A wide range of criteria is acceptable such as predicting human judgments, job performance, tenure, etc. This must include a description of criterion, research design (predictive, concurrent, etc.), and uncorrected zero-order correlations (so results can be compiled in future meta-analyses). May also include other statistics such as multivariate analyses, classification agreement, corrections, etc.
13. Evidence of diversity implications and fairness, as applicable (e.g., subgroup differences, adverse impact, differential prediction, candidate reactions, etc.).
14. Evidence of construct validity, as applicable (e.g., correlations with other selection procedures or information on the candidates, and also including narrative information as appropriate such as subject matter expert judgments).
15. Other evidence of effectiveness or value (e.g., utility analyses, financial or time savings, client satisfaction, etc.).
16. Scientific lessons learned about the technical development and validation of AI/ML selection tools that might be of value to future researchers.
17. Practical lessons learned (e.g., implementation challenges and solutions, gaining user acceptance, integration with other information technology systems such as applicant tracking and employee records, etc.).
18. Other notes or comments on the study.
19. Relevant references, if any.

Authors may submit their responses to these topics in any format, but please explicitly organize it in terms of the topics above or explain where to find each in a cover letter.