

Peer Review

Review of: "Data-Driven Innovation in Workforce Selection: A Clustering-Based Workflow for Technology Adoption in Indonesian Construction SMEs"

Francesca Sgobbi¹

1. University of Brescia, Italy

The manuscript presents a quantitative approach to ranking candidates based on their curricula vitae using a k-means clustering algorithm. While the approach is interesting, some methodological and conceptual concerns limit the robustness and generalisability of the findings.

Data and Scoring

The paper says that candidate scores were recorded on a 0–100 scale and standardised. However, it is not clear who assigned these scores or how the scoring criteria were chosen. Since the clustering results depend heavily on this data, more detail is needed to understand and trust the scoring process.

Sample size and skills

The study only looks at 30 pre-screened CVs instead of the full 161. Using all 161 could make the results more reliable and help recruiters focus on interviews with the most promising candidates. Also, only three skills are considered (AutoCAD drafting, report writing, and adaptability), which seems too few for meaningful selection. The paper should discuss how many skills and CVs would be needed for a stronger analysis.

Clustering method

The choice of imposing the identification of three clusters on the k-means algorithm implicitly assumes a general positive correlation between performance in all the considered competences. But what if a significant sub-group of candidates is very good at some skills and weak at the others? The paper should explain how the method handles groups of candidates with uneven skill profiles.

Use of AI tools

The authors mention AI-based recruitment tools but do not discuss them in detail. Since commercial versions of such tools are already available, it is unclear why a custom algorithm is needed. Comparing the method to these tools would make the paper more relevant.

Position details

The paper does not specify the job being recruited for. Based on the skills, it might be a designer or on-site supervisor, but clearer information would help interpret the outcomes and the tool's potential, based on the recruitment frequency of different positions.

Declarations

Potential competing interests: No potential competing interests to declare.