



Research article

Implementation of the Profile Matching Method for New Employee Candidate Selection at PT. ALD Logistik Indonesia

Muidin Subandi ^{a,1,*}; Dwi Septia ^{b,2}

^aKrisnadipayana University, Department of Informatics Engineering, Kota Bekasi 13077, Indonesia

^aKrisnadipayana University, Department of Informatics Engineering, Kota Bekasi 13077, Indonesia

email: ¹subandimuidin@gmail.com; ²septidwseptia77@gmail.com

* Correspondence

<http://doi.org/xxxx.xxxx>

ARTICLE INFO

Received: -----

Accepted: -----

Available online: -----

Keywords:

Decision Support System,
Profile Matching,
Employee Selection,
Recruitment,
Decision Making,
Human Resources

ABSTRACT

The employee selection process is an important factor in obtaining human resources that meet the company's needs. At PT. ALD Logistik Indonesia, the new employee selection process is still carried out manually, which has the potential to cause subjectivity in assessments, requires a relatively long time, and risks producing less than optimal decisions. This study aims to apply the Profile Matching method as a decision support system in the process of selecting new employee candidates to improve the objectivity and accuracy of decision making. The Profile Matching method is used by comparing candidate profiles to ideal profiles based on the criteria of work experience, warehousing experience, and experience operating warehouse vehicles. The research stages include data collection, determining standard profiles, gap mapping, value weighting, calculating Core Factors and Secondary Factors, and the candidate ranking process. Research data were obtained from 35 applicants who participated in the recruitment process at PT. ALD Logistik Indonesia, with 28 candidates who passed the administrative stage and participated in the assessment process. The results of the study indicate that the Profile Matching method is able to produce objective candidate rankings based on the level of suitability to the company's expected profile. The best candidate achieved a final score of 7.87, and the selection results showed a 26.67% increase in accuracy compared to the previous selection method. This study concludes that the Profile Matching method is effective as a decision support system in the new employee selection process because it can reduce subjectivity, increase the efficiency of the selection process, and produce more consistent decisions. The contribution of this study is to provide a Profile Matching-based employee selection model that can be applied to logistics companies to support a more effective and accurate recruitment process.

1. INTRODUCTION

Human resources (HR) are a strategic asset that plays a crucial role in determining an organization's success. The quality of recruited employees will impact productivity, operational effectiveness, and the company's long-term competitiveness[1],[2]. Therefore, the employee selection process must be conducted objectively, systematically, and based on relevant criteria to ensure the company finds candidates who meet its job requirements. However, in practice, many companies still use conventional selection methods that rely on subjective assessments by management, potentially resulting in inaccurate decisions and requiring a relatively long time[3],[4].

PT. ALD Logistik Indonesia is a company engaged in logistics, warehousing, and distribution services. The company's new employee selection process still involves manual document evaluation and interviews[5]. This method presents several challenges, such as the difficulty of consistently comparing candidates, the high risk of human error, and the inherent subjectivity of decision-making. This situation highlights the need for the

implementation of a decision support system that can facilitate a more objective and measurable selection process[6].

Extensive research has been conducted on the application of the Profile Matching method in decision support systems. Research by Albayrak shows that the combination of the Analytical Hierarchy Process (AHP) and Profile Matching methods can improve the effectiveness of the employee selection process by producing a more structured candidate ranking[7]. Another study by Wibowo proves that the Profile Matching method can reduce subjectivity in the recruitment process and accelerate decision-making[8]. Furthermore, recent research by Sunarti shows that implementing web-based Profile Matching can improve the efficiency and transparency of the employee selection process[9]. Similar findings have also been reported in various Scopus-indexed publications, stating that the multi-criteria decision-making approach is increasingly being used to support the recruitment process because it can improve decision quality and the consistency of candidate evaluation.

However, most previous research has focused on developing decision support systems or combining Profile Matching with other methods such as AHP, TOPSIS, and SAW[10],[11]. Research specifically applying the Profile Matching method to the workforce selection process in the logistics sector using criteria such as work experience, warehousing experience, and experience operating warehouse vehicles is still relatively limited. Furthermore, few studies have evaluated the accuracy of selection results compared to existing recruitment processes in companies.

Based on these issues, this study aims to apply the Profile Matching method to the selection process for new employees at PT. ALD Logistik Indonesia. This method is used to compare candidate profiles with the ideal profile established by the company to obtain a ranking of candidates based on their level of suitability. The main contribution of this research is the development of a decision support system model capable of improving the objectivity, consistency, and accuracy of the employee selection process in logistics companies. The results are expected to serve as a reference for organizations in optimizing recruitment processes based on measurable and systematic decision-making methods.

2. METHODS

3.1. Research Stages

The research stages are a series of processes carried out systematically to achieve the research objective, namely developing a decision support system for selecting new employee candidates using the Profile Matching method at PT. ALD Logistik Indonesia. This research began with identifying problems encountered in the employee selection process, followed by a literature review to obtain a relevant theoretical basis. Data was then collected through observation, interviews, and documentation. The data obtained was then processed by determining assessment criteria and ideal candidate profiles as the basis for implementing the Profile Matching method. Subsequent stages included gap mapping, value weighting, Core Factor and Secondary Factor calculations, and candidate ranking[12],[13]. The results were then analyzed and evaluated to determine the effectiveness of the method used in supporting the decision-making process. The overall research stages are shown in Figure 1.

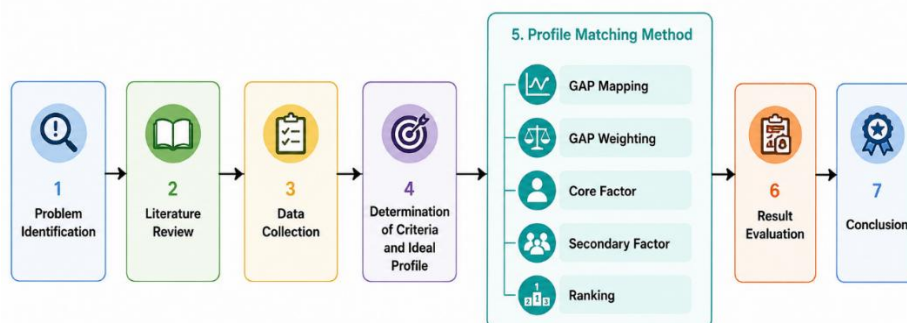


Figure 1. Research Stages for Employee Selection Using the Profile Matching Method

3.2. Data Collection

Data collection was conducted to obtain information to support the selection process for new employee candidates at PT. ALD Logistik Indonesia. The techniques used included: (1) observation, to directly observe the employee recruitment and selection process; (2) interviews, to obtain information regarding assessment criteria and management decision-making mechanisms; and (3) documentation, through the collection of applicant data, selection results, candidate work experience, and other supporting documents used in the implementation of the Profile Matching method. The dataset used in this study comes from employee recruitment data from PT. ALD

Logistik Indonesia for the period of April 2024. The number of registered applicants was 35 people, then an administrative selection process was carried out so that 28 candidates were obtained who met the requirements and were entitled to participate in the interview stage as shown in Table 1. Furthermore, based on the evaluation and assessment process carried out by the company, the 15 best candidates were determined to have passed and were recommended for recruitment, as shown in Table 3.

Table 1. *List of Applicants Participating in the Interview Stage*

No.	Candidate	Work Experience (Months)	Warehouse Experience (Months)	Warehouse Vehicle Operation Experience (Months)	Average Work Experience (Months)
1	Candidate 1	38.0	21.0	29.0	29.3
2	Candidate 2	39.0	12.0	12.0	21.0
3	Candidate 3	29.0	8.0	9.0	15.3
4	Candidate 4	37.0	21.0	37.0	31.7
5	Candidate 5	20.0	7.0	5.0	10.7
6	Candidate 6	29.0	12.0	8.0	16.3
7	Candidate 7	20.0	20.0	6.0	15.3
8	Candidate 8	29.0	7.0	9.0	15.0
9	Candidate 9	21.0	12.0	20.0	17.7
10	Candidate 10	31.0	30.0	12.0	24.3
11	Candidate 13	30.0	9.0	12.0	17.0
12	Candidate 14	37.0	30.0	21.0	29.3
13	Candidate 15	21.0	9.0	9.0	13.0
14	Candidate 16	37.0	9.0	12.0	19.3
15	Candidate 18	30.0	21.0	9.0	20.0
16	Candidate 19	30.0	12.0	12.0	18.0
17	Candidate 20	30.0	9.0	12.0	17.0
18	Candidate 21	32.0	21.0	29.0	27.3
19	Candidate 22	21.0	21.0	12.0	18.0
20	Candidate 23	36.0	9.0	12.0	19.0
21	Candidate 24	37.0	12.0	21.0	23.3
22	Candidate 25	30.0	8.0	12.0	16.7
23	Candidate 27	21.0	12.0	8.0	13.7
24	Candidate 29	12.0	9.0	8.0	9.7
25	Candidate 30	36.0	9.0	9.0	18.0
26	Candidate 31	12.0	9.0	9.0	10.0
27	Candidate 32	9.0	9.0	5.0	7.7
28	Candidate 35	37.0	36.0	9.0	27.3

Table 2. *Candidate Assessment Criteria*

Assessment Aspect	≤ 4 Months	≤ 12 Months	≤ 24 Months	≤ 36 Months	> 36 Months
Work Experience	5.00–7.39	7.40–7.52	7.53–7.67	7.68–7.87	7.88–8.00
Warehouse Experience	5.00–7.39	7.40–7.52	7.53–7.67	7.68–7.87	7.88–8.00
Warehouse Vehicle Operation Experience	5.00–7.39	7.40–7.52	7.53–7.67	7.68–7.87	7.88–8.00

Table 2. presents the candidate assessment criteria based on the length of work experience possessed by prospective employees. The assessment was conducted by converting experience duration into score intervals that represent the level of candidate competency for each evaluation aspect. Higher scores indicate greater relevance and suitability of candidate experience to the company's recruitment requirements.

Table 3. *List of Applicants Who Passed the Interview Stage*

No.	Candidate	Work Experience Score	Warehouse Experience Score	Warehouse Vehicle Operation Experience Score	Final Score
1	Candidate 4	8.00	7.60	8.00	7.87
2	Candidate 35	8.00	8.00	7.40	7.80
3	Candidate 14	8.00	7.70	7.60	7.77
4	Candidate 10	8.00	7.68	7.50	7.73
5	Candidate 1	7.89	7.55	7.68	7.71
6	Candidate 24	8.00	7.50	7.60	7.70
7	Candidate 21	7.80	7.60	7.70	7.70
8	Candidate 2	8.00	7.50	7.50	7.67
9	Candidate 18	8.00	7.60	7.40	7.67
10	Candidate 23	8.00	7.40	7.50	7.63
11	Candidate 25	7.80	7.48	7.52	7.60
12	Candidate 30	7.88	7.40	7.50	7.59
13	Candidate 16	7.88	7.40	7.49	7.59
14	Candidate 20	7.70	7.49	7.52	7.57
15	Candidate 9	7.60	7.50	7.60	7.57

3.3. Assessment Criteria

Assessment criteria are factors used to evaluate a candidate's suitability for the job requirements available at PT. ALD Logistik Indonesia. The criteria were determined based on interviews with company management and an analysis of the competency requirements for the open positions, namely shipping and warehousing staff. The selected criteria are expected to represent the candidate's abilities and experience relevant to the job. This study used three main criteria: work experience, warehousing experience, and experience operating warehouse vehicles. These three criteria were chosen because they are considered to have a significant influence on a candidate's ability to perform logistics and warehousing operational tasks[6]. Table 4. shows the assessment criteria used in the study

Table 4. *Candidate Assessment Criteria*

Code	Criteria	Description
K1	Work Experience	The duration of the candidate's work experience in fields relevant to the position being applied for.
K2	Warehouse Experience	The duration of the candidate's experience in warehouse activities, including storage, inventory management, and goods distribution.
K3	Warehouse Vehicle Operation Experience	The duration of the candidate's experience in operating vehicles or equipment used in warehouse and distribution activities.

To simplify the calculation process using the Profile Matching method, the score for each criterion is converted into a rating scale based on the candidate's experience. The more experience a candidate has, the higher the score they receive. The conversion is performed as shown in Table 5.

Table 5. *Criteria Assessment Scale*

Score Range	Category	Score
5.00 – 7.39	Very Poor	1
7.40 – 7.52	Poor	2
7.53 – 7.67	Fair	3
7.68 – 7.87	Good	4
7.88 – 8.00	Very Good	5

Next, each criterion is classified into Core Factor and Secondary Factor groups. Warehousing experience is designated as a Core Factor because it is the primary competency required for the position studied. Meanwhile,

work experience and experience operating warehouse vehicles are categorized as Secondary Factors, serving as supporting factors in the assessment process, as shown in Table 6. This classification is used as a basis for calculating the final score using the Profile Matching method, so that candidates who have core competencies that match the company's needs will get a higher score in the ranking process.

Table 6. Assessment Factor Classification

Criteria	Factor Type
Work Experience	Secondary Factor
Warehouse Experience	Core Factor
Warehouse Vehicle Operation Experience	Secondary Factor

3.4. Profile Matching Method

The Profile Matching method is a method in Decision Support Systems (DSS) used to compare an individual's profile with a predetermined ideal profile. The basic concept of this method is to measure the level of match between a candidate's competencies and the competencies required by the company. The smaller the gap between the candidate's profile and the ideal profile, the higher the candidate's suitability for the position. In this study, the Profile Matching method was used to assist the selection process for new employees at PT. ALD Logistik Indonesia based on three assessment criteria: work experience, warehousing experience, and experience operating warehouse vehicles. This method was chosen because it produces a more objective, measurable, and consistent assessment process than manual selection processes. The stages of implementing the Profile Matching method in this study consist of several steps, as shown in Figure 2.

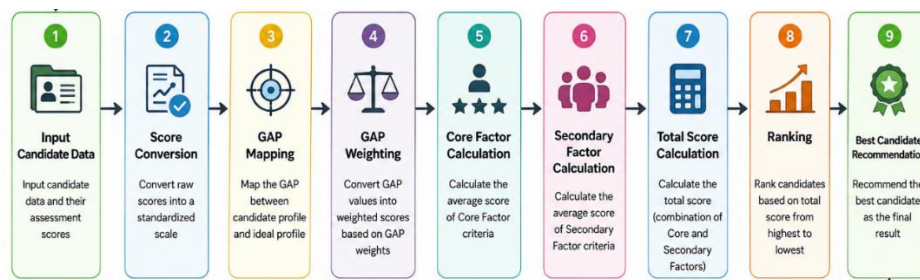


Figure 2. Stages of the Profile Matching Method

2.4.1. Determining the Ideal Profile

The first stage is determining the ideal profile used as the standard for candidate assessment. The ideal profile is a target score that reflects the company's expected competencies for each assessment criterion. The target value is used as a reference in the gap analysis process.

2.4.2. GAP Mapping

Gap mapping is performed by calculating the difference between the candidate's value and the predetermined ideal profile value[14]. This difference indicates the candidate's competency level and the company's needs, as shown in formula 1.

$GAP = \text{Candidate Value} - \text{Standard Value}$	(1)
--	-----

The smaller the gap value, the higher the candidate's level of fit with the expected profile.

2.4.3. GAP Weighting

Once the gap score is obtained, the next step is to convert the gap score into an assessment weight. The weighting process is carried out to assign a value to the candidate's competency match[15]. Candidates with scores closer to the ideal profile will receive a higher weight than those with a larger difference, as shown in Table 7.

Table 7. Gap Weight Comparison

Gap Difference	Weight	Description
0	5.0	No difference (Competency matches the required profile)
1	4.5	Competency exceeds the requirement by 1 level
-1	4.0	Competency is below the requirement by 1 level
2	3.5	Competency exceeds the requirement by 2 levels
-2	3.0	Competency is below the requirement by 2 levels
3	2.5	Competency exceeds the requirement by 3 levels
-3	2.0	Competency is below the requirement by 3 levels
4	1.5	Competency exceeds the requirement by 4 levels
-4	1.0	Competency is below the requirement by 4 levels

2.4.4. Calculating Core Factors and Secondary Factors

In the Profile Matching method, each criterion is classified into two groups: Core Factors and Secondary Factors[16],[17]. Core Factors are the primary factors that have the greatest influence on a candidate's assessment, while Secondary Factors are supporting factors. The Core Factor value is calculated using equations 2 and 3.

$NCF = \frac{\sum NC}{\sum IC}$	(2)
---------------------------------	-----

where:

NCF = Average Core Factor score

$\sum NC$ = Total Core Factor score

$\sum IC$ = Number of Core Factor criteria

$NSF = \frac{\sum NS}{\sum IS}$	(3)
---------------------------------	-----

where:

NSF = Average Core *Secondary Factor*

$\sum NS$ = Total Core *Secondary Factor*

$\sum IS$ = Number of Core *Secondary Factor*

2.4.5. Calculation of Total Score

Each candidate's total score is obtained from the combination of Core Factor and Secondary Factor scores. In this study, the company assigned greater weight to Core Factors because they are considered more decisive in the selection process[18],[19]. The total score equation can be shown in formula 4.

$Total\ Score = (70\% \times NCF) + (30\% \times NSF)$	(4)
--	-----

The weighting percentage can be adjusted according to organizational needs or company policy.

2.4.6. Candidate Ranking

The final stage is ranking based on the total score obtained by each candidate. The candidate with the highest score has the highest level of fit with the company's ideal profile and is recommended as the best candidate for recruitment. The ranking results are used as the basis for decision-making in the new employee selection process, helping the company objectively and systematically identify candidates who best meet the job requirements.

3.5. System Evaluation

A system evaluation was conducted to determine the effectiveness of the Profile Matching method in supporting the selection process for new employees at PT. ALD Logistik Indonesia. The evaluation aimed to

measure the system's ability to generate candidate recommendations that align with the company's needs and to compare the selection results using the Profile Matching method with the previous manual selection process.

The evaluation method used in this study was a comparative evaluation, which compares the candidate rankings generated by the system with the recruitment decisions made by the company. The evaluation was conducted on 28 candidates who had passed the administrative stage and participated in the interview process.

The system evaluation was conducted to assess the performance of the Profile Matching method in supporting the employee selection process. Evaluation indicators included: (1) the suitability of the selection results, by comparing the system's recommendations with the company's decisions; (2) the objectivity of the assessment, through the application of consistent criteria and calculation processes; (3) the efficiency of the selection process, based on the ease and speed of the ranking process compared to manual methods. and (4) the accuracy of candidate recommendations, which is calculated using equation 5.

$$\text{Accuracy (\%)} = (\text{Number of Matched Candidates} / \text{Number of Candidates Evaluated}) \times 100\% \quad (5)$$

The accuracy value is used to measure the Profile Matching method's ability to generate candidate recommendations that align with the company's needs.

5. RESULT

The results analysis phase was conducted to evaluate the application of the Profile Matching method in the selection process for new employees at PT. ALD Logistik Indonesia. This analysis aimed to measure the method's ability to generate recommendations for candidates with the highest level of fit to the ideal profile established by the company based on the assessment criteria used. The analysis process involved the Profile Matching method's calculation stages, including value conversion, gap mapping, gap weighting, Core Factor calculation, Secondary Factor calculation, and candidate ranking. The data used in the study were the results of PT. ALD Logistik Indonesia's employee selection process for the period April 2024, with 35 applicants. From this data, an evaluation of candidates who met the selection criteria was conducted to determine the best candidate recommendations. The analysis results were used to determine the candidate with the highest final score, indicating the most optimal fit to the company's needs. Furthermore, this analysis was used to evaluate the effectiveness of the Profile Matching method in supporting the decision-making process, making it more objective, consistent, and structured compared to manual selection methods..

3.1. Profile Matching Calculation Results

The Profile Matching calculation process is conducted to determine the candidate's level of suitability to the ideal profile established by PT. ALD Logistik Indonesia. Prior to the calculation process, the assessment criteria, along with the grouping of Core Factor and Secondary Factor components, were determined, as explained in the research methods section. The initial calculation stage involved evaluating each candidate based on the predetermined aspects and criteria. Candidate assessments were conducted by PT. ALD Logistik Indonesia management, taking into account the company's needs and each candidate's competencies. The results of the initial evaluation are presented in Table 8.

Table 8. *Candidate Evaluation Results*

No.	Candidate	Work Experience	Warehouse Experience	Warehouse Vehicle Operation Experience
1	Candidate 1	7.89	7.55	7.68
2	Candidate 2	8.00	7.50	7.50
3	Candidate 3	7.70	7.40	7.40
4	Candidate 4	8.00	7.60	8.00
5	Candidate 5	7.60	7.40	7.40
6	Candidate 6	7.70	7.50	7.40
7	Candidate 7	7.60	7.60	7.40
8	Candidate 8	7.70	7.40	7.50
9	Candidate 9	7.60	7.50	7.60
10	Candidate 10	8.00	7.68	7.50
11	Candidate 13	7.60	7.40	7.40
12	Candidate 14	8.00	7.70	7.60
13	Candidate 15	7.60	7.50	7.40

14	Candidate 16	7.88	7.40	7.49
15	Candidate 18	8.00	7.60	7.40
16	Candidate 19	7.70	7.45	7.49
17	Candidate 20	7.70	7.49	7.52
18	Candidate 21	7.80	7.60	7.70
19	Candidate 22	7.60	7.60	7.50
20	Candidate 23	8.00	7.40	7.50
21	Candidate 24	8.00	7.50	7.60
22	Candidate 25	7.80	7.48	7.52
23	Candidate 27	7.60	7.50	7.40
24	Candidate 29	7.50	7.40	7.40
25	Candidate 30	7.88	7.40	7.50
26	Candidate 31	7.50	7.40	7.40
27	Candidate 32	7.40	7.40	7.40
28	Candidate 35	8.00	8.00	7.40

Next, the evaluation results are converted into scores based on a predetermined assessment range. This conversion process aims to standardize candidate scores so they can be processed using the Profile Matching method. The assessment range used is shown in Table 9, while the results of the candidate score conversion are shown in Table 10.

Table 9. *Converted Candidate Scores Based on the Evaluation Range*

No.	Candidate	Work Experience	Warehouse Experience	Warehouse Vehicle Operation Experience
1	Candidate 1	A	C	B
2	Candidate 2	A	D	D
3	Candidate 3	B	D	D
4	Candidate 4	A	C	A
5	Candidate 5	C	D	D
6	Candidate 6	B	D	D
7	Candidate 7	C	C	D
8	Candidate 8	B	D	D
9	Candidate 9	C	D	C
10	Candidate 10	A	B	D
11	Candidate 13	C	D	D
12	Candidate 14	A	B	C
13	Candidate 15	C	D	D
14	Candidate 16	A	D	D
15	Candidate 18	A	C	D
16	Candidate 19	B	D	D
17	Candidate 20	B	D	C
18	Candidate 21	B	C	B
19	Candidate 22	C	C	D
20	Candidate 23	A	D	D
21	Candidate 24	A	D	C
22	Candidate 25	B	D	C
23	Candidate 27	C	D	D
24	Candidate 29	D	D	D
25	Candidate 30	A	D	D
26	Candidate 31	D	D	D
27	Candidate 32	D	D	D
28	Candidate 35	A	A	D

Candidate assessment results are converted into score categories to simplify evaluation and determine suitability levels. Category **A** indicates the highest level of suitability (*Excellent*), followed by B (Good), C (Fair), D (Poor), and E (Very Poor) as the lowest evaluation category.

Table 10. *Candidate Score Values*

No.	Candidate	Work Experience	Warehouse Experience	Warehouse Vehicle Operation Experience
1	Candidate 1	5	3	4
2	Candidate 2	5	2	2
3	Candidate 3	4	2	2
4	Candidate 4	5	3	5
5	Candidate 5	3	2	2
6	Candidate 6	4	2	2
7	Candidate 7	3	3	2
8	Candidate 8	4	2	2
9	Candidate 9	3	2	3
10	Candidate 10	5	4	2
11	Candidate 13	3	2	2
12	Candidate 14	5	4	3
13	Candidate 15	3	2	2
14	Candidate 16	5	2	2
15	Candidate 18	5	3	2
16	Candidate 19	4	2	2
17	Candidate 20	4	2	3
18	Candidate 21	4	3	4
19	Candidate 22	3	3	2
20	Candidate 23	5	2	2
21	Candidate 24	5	2	3
22	Candidate 25	4	2	3
23	Candidate 27	3	2	2
24	Candidate 29	2	2	2
25	Candidate 30	5	2	2
26	Candidate 31	2	2	2
27	Candidate 32	2	2	2
28	Candidate 35	5	5	2

Scores are classified into five categories to represent candidate performance levels, where **5 indicates Excellent, 4 Good, 3 Fair, 2 Poor, and 1 Very Poor.**

The next step is to map the gap by calculating the difference between the candidate's score and the company's predetermined standard profile. The gap score is used to measure the candidate's competency match to the company's needs. The results of the gap calculation are shown in Table 11.

Table 11. *Candidate GAP Calculation Results*

No.	Candidate	Work Experience GAP	Warehouse Experience GAP	Warehouse Vehicle Operation Experience GAP
1	Candidate 1	2	0	1
2	Candidate 2	2	-1	-1
3	Candidate 3	1	-1	-1
4	Candidate 4	2	0	2
5	Candidate 5	0	-1	-1
6	Candidate 6	1	-1	-1
7	Candidate 7	0	0	-1
8	Candidate 8	1	-1	-1
9	Candidate 9	0	-1	0
10	Candidate 10	2	1	-1
11	Candidate 13	0	-1	-1
12	Candidate 14	2	1	0
13	Candidate 15	0	-1	-1
14	Candidate 16	2	-1	-1
15	Candidate 18	2	0	-1
16	Candidate 19	1	-1	-1
17	Candidate 20	1	-1	0

18	Candidate 21	1	0	1
19	Candidate 22	0	0	-1
20	Candidate 23	2	-1	-1
21	Candidate 24	2	-1	0
22	Candidate 25	1	-1	0
23	Candidate 27	0	-1	-1
24	Candidate 29	-1	-1	-1
25	Candidate 30	2	-1	-1
26	Candidate 31	-1	-1	-1
27	Candidate 32	-1	-1	-1
28	Candidate 35	2	2	-1

After the gap value is obtained, a weighting process is carried out by converting the gap value into an assessment weight according to the conversion rules set out in Table 7 (Gap Weight Conversion). This process produces a weight value that represents the candidate's level of match to the ideal profile. The results of the gap weight conversion are shown in Table 12 and are used as the basis for calculating the Core Factor, Secondary Factor, and the candidate ranking process in the next stage.

Table 12. GAP Conversion Results

No.	Candidate	Work Experience	Warehouse Experience	Warehouse Vehicle Operation Experience
1	Candidate 1	4.00	3.00	3.50
2	Candidate 2	4.00	2.50	2.50
3	Candidate 3	3.50	2.50	2.50
4	Candidate 4	4.00	3.00	4.00
5	Candidate 5	3.00	2.50	2.50
6	Candidate 6	3.50	2.50	2.50
7	Candidate 7	3.00	3.00	2.50
8	Candidate 8	3.50	2.50	2.50
9	Candidate 9	3.00	2.50	3.00
10	Candidate 10	4.00	3.50	2.50
11	Candidate 13	3.00	2.50	2.50
12	Candidate 14	4.00	3.50	3.00
13	Candidate 15	3.00	2.50	2.50
14	Candidate 16	4.00	2.50	2.50
15	Candidate 18	4.00	3.00	2.50
16	Candidate 19	3.50	2.50	2.50
17	Candidate 20	3.50	2.50	3.00
18	Candidate 21	3.50	3.00	3.50
19	Candidate 22	3.00	3.00	2.50
20	Candidate 23	4.00	2.50	2.50
21	Candidate 24	4.00	2.50	3.00
22	Candidate 25	3.00	2.50	3.00
23	Candidate 27	3.00	2.50	2.50
24	Candidate 29	2.50	2.50	2.50
25	Candidate 30	4.00	2.50	2.50
26	Candidate 31	2.50	2.50	2.50
27	Candidate 32	2.50	2.50	2.50
28	Candidate 35	4.00	4.00	2.50

From the weighted gap conversion values, the NSF and NCF, as well as the Criteria values, are then calculated. The results of the NSF and NCF calculations are shown in Table 13.

Table 13. NCF and NSF Calculation Results

No.	Candidate	A1	A2	A3	NCF (70%)	NSF A1 (30%)	NSF A3 (30%)
1	Candidate 1	4.00	3.00	3.50	2.10	1.20	1.05
2	Candidate 2	4.00	2.50	2.50	1.75	1.20	0.75
3	Candidate 3	3.50	2.50	2.50	1.75	1.05	0.75
4	Candidate 4	4.00	3.00	4.00	2.10	1.20	1.20
5	Candidate 5	3.00	2.50	2.50	1.75	0.90	0.75

6	Candidate 6	3.50	2.50	2.50	1.75	1.05	0.75
7	Candidate 7	3.00	3.00	2.50	2.10	0.90	0.75
8	Candidate 8	3.50	2.50	2.50	1.75	1.05	0.75
9	Candidate 9	3.00	2.50	3.00	1.75	0.90	0.90
10	Candidate 10	4.00	3.50	2.50	2.45	1.20	0.75
11	Candidate 13	3.00	2.50	2.50	1.75	0.90	0.75
12	Candidate 14	4.00	3.50	3.00	2.45	1.20	0.90
13	Candidate 15	3.00	2.50	2.50	1.75	0.90	0.75
14	Candidate 16	4.00	2.50	2.50	1.75	1.20	0.75
15	Candidate 18	4.00	3.00	2.50	2.10	1.20	0.75
16	Candidate 19	3.50	2.50	2.50	1.75	1.05	0.75
17	Candidate 20	3.50	2.50	3.00	1.75	1.05	0.90
18	Candidate 21	3.50	3.00	3.50	2.10	1.05	1.05
19	Candidate 22	3.00	3.00	2.50	2.10	0.90	0.75
20	Candidate 23	4.00	2.50	2.50	1.75	1.20	0.75
21	Candidate 24	4.00	2.50	3.00	1.75	1.20	0.90
22	Candidate 25	3.00	2.50	3.00	1.75	0.90	0.90
23	Candidate 27	3.00	2.50	2.50	1.75	0.90	0.75
24	Candidate 29	2.50	2.50	2.50	1.75	0.75	0.75
25	Candidate 30	4.00	2.50	2.50	1.75	1.20	0.75
26	Candidate 31	2.50	2.50	2.50	1.75	0.75	0.75
27	Candidate 32	2.50	2.50	2.50	1.75	0.75	0.75
28	Candidate 35	4.00	4.00	2.50	2.80	1.20	0.75

Description:

Green Cell: Core Factor

Yellow Cell: Secondary Factor

A1: Work Experience

A2: Warehousing Experience

A3: Warehousing Vehicle Operation Experience

NCF: Core Factor Value

NSF: Secondary Factor Value

Calculation:

Candidate 4's NCF = 70% x A2

= 0.7 x 3.00

= 2.10

Candidate 4's NSF = 30% x A3

= 0.3 x 4.00

= 1.20

Candidate 4's NSF = 30% x A1

= 0.3 x 4.00

= 1.20

After obtaining the calculation results for each aspect and the criteria for each aspect, the next step is to calculate the final score for each candidate in Table 13.

To obtain the final score in Table 14, the researcher performed the following calculations:

Final Score for Candidate 4 = 25% x Score A1 + 50% x Score A2 + 25% x Score A3

= (25% x 1.20) + (50% x 2.10) + (25% x 1.20)

= 1.65

Description:

Final Score: The final score obtained by each candidate

25%: Weighting for the Work Experience Aspect (A1)

A1: Score for the Work Experience Aspect

50%: Weighting for the Warehousing Experience Aspect (A2)

A2: Score for the Warehousing Experience Aspect

25%: Weighting for the Warehousing Vehicle Operation Aspect (A3)

A3: Score for the Warehousing Vehicle Operation Aspect

Table 14. *Final Candidate Score Calculation Results*

No.	Candidate	A1 (25%)	A2 (50%)	A3 (25%)	Final Score
1	Candidate 1	1.20	2.10	1.05	1.61
2	Candidate 2	1.20	1.75	0.75	1.36
3	Candidate 3	1.05	1.75	0.75	1.33
4	Candidate 4	1.20	2.10	1.20	1.65
5	Candidate 5	0.90	1.75	0.75	1.29
6	Candidate 6	1.05	1.75	0.75	1.33
7	Candidate 7	0.90	2.10	0.75	1.46
8	Candidate 8	1.05	1.75	0.75	1.33
9	Candidate 9	0.90	1.75	0.90	1.33
10	Candidate 10	1.20	2.45	0.75	1.71
11	Candidate 13	0.90	1.75	0.75	1.29
12	Candidate 14	1.20	2.45	0.90	1.75
13	Candidate 15	0.90	1.75	0.75	1.29
14	Candidate 16	1.20	1.75	0.75	1.36
15	Candidate 18	1.20	2.10	0.75	1.54
16	Candidate 19	1.05	1.75	0.75	1.33
17	Candidate 20	1.05	1.75	0.90	1.36
18	Candidate 21	1.05	2.10	1.05	1.58
19	Candidate 22	0.90	2.10	0.75	1.46
20	Candidate 23	1.20	1.75	0.75	1.36
21	Candidate 24	1.20	1.75	0.90	1.40
22	Candidate 25	0.90	1.75	0.90	1.33
23	Candidate 27	0.90	1.75	0.75	1.29
24	Candidate 29	0.75	1.75	0.75	1.25
25	Candidate 30	1.20	1.75	0.75	1.36
26	Candidate 31	0.75	1.75	0.75	1.25
27	Candidate 32	0.75	1.75	0.75	1.25
28	Candidate 35	1.20	2.80	0.75	1.89

After obtaining the final candidate scores for April, the next step in the Profile Matching method is to rank the candidates based on those scores. The ranking results can be seen in Table 15.

Table 15. *Candidate Ranking Results*

Rank	Candidate	A1 (25%)	A2 (50%)	A3 (25%)	Final Score
1	Candidate 35	1.20	2.80	0.75	1.89
2	Candidate 14	1.20	2.45	0.90	1.75
3	Candidate 10	1.20	2.45	0.75	1.71
4	Candidate 4	1.20	2.10	1.20	1.65
5	Candidate 1	1.20	2.10	1.05	1.61
6	Candidate 21	1.05	2.10	1.05	1.58
7	Candidate 18	1.20	2.10	0.75	1.54
8	Candidate 22	0.90	2.10	0.75	1.46
9	Candidate 7	0.90	2.10	0.75	1.46
10	Candidate 24	1.20	1.75	0.90	1.40
11	Candidate 2	1.20	1.75	0.75	1.36
12	Candidate 23	1.20	1.75	0.75	1.36
13	Candidate 30	1.20	1.75	0.75	1.36
14	Candidate 16	1.20	1.75	0.75	1.36
15	Candidate 20	1.05	1.75	0.90	1.36
16	Candidate 25	0.90	1.75	0.90	1.33
17	Candidate 9	0.90	1.75	0.90	1.33
18	Candidate 19	1.05	1.75	0.75	1.33
19	Candidate 6	1.05	1.75	0.75	1.33
20	Candidate 8	1.05	1.75	0.75	1.33
21	Candidate 3	1.05	1.75	0.75	1.33
22	Candidate 15	0.90	1.75	0.75	1.29
23	Candidate 27	0.90	1.75	0.75	1.29
24	Candidate 5	0.90	1.75	0.75	1.29

25	Candidate 13	0.90	1.75	0.75	1.29
26	Candidate 29	0.75	1.75	0.75	1.25
27	Candidate 31	0.75	1.75	0.75	1.25
28	Candidate 32	0.75	1.75	0.75	1.25

Based on Table 15, the ranking results show the final recommendations generated by the Profile Matching method after calculating the weighted scores of all assessment criteria. Candidates with higher final scores indicate a greater degree of compatibility with the company's ideal profile and are prioritized in the recruitment decision-making process. Based on the ranking results, Candidate 35 achieved the highest final score of 1.89, indicating the highest suitability for the position according to the established criteria.

5. DISCUSSIONS

The implementation of a decision support system using the Profile Matching method was completed on 28 candidate data sets. The next stage was to evaluate and analyze the research results. This stage aimed to measure the system's performance in generating candidate recommendations based on their level of suitability to the predetermined ideal profile. The evaluation was conducted to assess the effectiveness of the Profile Matching method in supporting a more objective, consistent, and structured employee selection process compared to the previously implemented manual selection process. The evaluation process included analysis of gap calculations, weighting, Core Factor calculations, Secondary Factors, and the final candidate ranking.

The test results were then compared with the selection results conducted by company management to determine the level of suitability of the system's recommendations. This comparison was used to identify the system's ability to generate decisions aligned with company needs and as a basis for evaluating potential system development in further research. Based on the evaluation results, the system demonstrated its ability to process candidate data and generate rankings systematically based on predetermined criteria. A comparison of the evaluation results and system recommendations can be seen in Tables 16 and 15.

Table 16. *Evaluation Results Using the Current Selection System*

Rank	Candidate	Work Experience	Warehouse Experience	Warehouse Vehicle Operation Experience	Final Score
1	Candidate 4	8.00	7.60	8.00	7.87
2	Candidate 35	8.00	8.00	7.40	7.80
3	Candidate 14	8.00	7.70	7.60	7.77
4	Candidate 10	8.00	7.68	7.50	7.73
5	Candidate 1	7.89	7.55	7.68	7.71
6	Candidate 24	8.00	7.50	7.60	7.70
7	Candidate 21	7.80	7.60	7.70	7.70
8	Candidate 2	8.00	7.50	7.50	7.67
9	Candidate 18	8.00	7.60	7.40	7.67
10	Candidate 23	8.00	7.40	7.50	7.63
11	Candidate 25	7.80	7.48	7.52	7.60
12	Candidate 30	7.88	7.40	7.50	7.59
13	Candidate 16	7.88	7.40	7.49	7.59
14	Candidate 20	7.70	7.49	7.52	7.57
15	Candidate 9	7.60	7.50	7.60	7.57

Based on Table 16, the assessment results using the company's current selection method show that Candidate 4 received the highest final score of 7.87, placing him first out of 15 candidates who passed the interview stage. The assessment using the current method is based on the candidate's accumulated scores based on the company's criteria without considering the level of fit with the ideal profile in a structured manner.

In contrast, Table 13, which displays the results of the assessment using the Profile Matching method, shows a change in the candidate ranking order. Using this method, Candidate 35 received the highest final score and was ranked first as the candidate most suited to the company's needs. The difference in ranking results occurs because the Profile Matching method not only considers the candidate's absolute score but also calculates the level of fit between the candidate's competencies and the ideal profile through gap mapping, weighting, and Core Factor and Secondary Factor calculations. These results demonstrate that the Profile Matching method provides a more

objective and structured assessment approach than the previously used selection method. By considering the level of fit between competencies and job requirements, this method can generate more relevant candidate recommendations and support a more effective decision-making process.

The research results show that the application of the Profile Matching method resulted in a more structured candidate selection process compared to the assessment method previously used at PT. ALD Logistik Indonesia. Through a gap mapping approach, criteria weighting, and Core Factor and Secondary Factor calculations, the system can evaluate the candidate's level of suitability to the ideal profile established by the company. This study revealed changes in selection decisions for four candidates compared to the existing assessment method, demonstrating that a profile-match-based approach can produce more objective recommendations. These findings align with previous research that found the Profile Matching method to be effective in supporting decision-making in the human resource selection and evaluation process because it reduces assessment subjectivity and produces a more systematic ranking process.

Previous research generally applied Profile Matching to employee selection, job promotions, or the selection of top employees, using a combination of competency, performance, and work behavior. However, most studies still used general criteria and did not specifically accommodate the operational characteristics of warehousing as the basis for candidate assessment, as shown in Table 17. The contribution of this research lies in the development of a selection model that adapts to the operational needs of logistics companies through three main criteria: work experience, warehousing experience, and experience operating warehouse vehicles. Furthermore, this study also applies criteria grouping into Core Factors and Secondary Factors to produce assessment priorities that are more representative of company needs. However, this study is still limited by the amount of data used, which comes from a single recruitment period, and has not been compared with other decision-making methods such as AHP, SAW, TOPSIS, or PROMETHEE. Therefore, further research can develop a hybrid model and expand the amount of data to increase the validity and generalizability of the research results.

Table 17. Literature Review and Research Position (Research Gap)

No.	Authors	Method	Research Object	Main Findings	Research Gap / Difference from This Study
1	Wibowo et al. (2024)[8]	Profile Matching + Linear Interpolation	Employee Selection at PT Berdikari Meubel Nusantara	The system improved candidate recommendations and achieved high user acceptance.	This study applies only the <i>Profile Matching</i> method and focuses on employee selection in the logistics sector based on work experience and warehouse-related experience.
2	Alamsyah et al. (2025)[20]	AHP + Profile Matching	Permanent Employee Selection	The integration of weighting and profile matching improved decision objectivity.	This study does not implement AHP and emphasizes the classification of criteria into <i>Core Factor</i> and <i>Secondary Factor</i> .
3	Bangun et al. (2025)[21]	Profile Matching + PROMETHEE	New Employee Recruitment	The proposed approach reduced subjectivity and improved selection effectiveness.	This study adopts a simpler evaluation approach that aligns with operational requirements in the logistics sector.
4	Brisilla & Sundarajan (2024)[4]	SAW + Profile Matching	Employee Selection using MCDM	Combining methods improved the ranking and decision-making process.	This study focuses on evaluating candidate suitability using profile matching without external weighting methods.
5	This Study	Profile Matching	Employee Candidate	Generated candidate recommendations based	Provides a more contextual employee

Selection at PT. ALD Logistics Indonesia	on the level of compatibility with the ideal profile using work experience, warehouse experience, and warehouse vehicle operation experience criteria.	selection model for the logistics sector through the implementation of Core–Secondary Factor evaluation.
--	--	--

5. CONCLUSION

This study successfully implemented the Profile Matching method as a decision support system in the new employee selection process at PT ALD Logistics Indonesia. Based on data processing of 28 candidates using the criteria of Work Experience, Warehousing Experience, and Warehouse Vehicle Operation Experience, the proposed method was able to produce a more structured assessment process based on the level of conformity to the ideal profile. The results showed differences in selection decisions compared to the existing system, with the Profile Matching method resulting in changes to recommendations for four candidates and selecting Candidate 35 as the candidate with the highest final score. These findings demonstrate the research's contribution to providing a more objective and measurable selection approach that supports the quality of decision-making in the recruitment process. However, this study still has several limitations, including the relatively limited data, the use of data from only one recruitment period, and the assessment criteria that focused solely on work experience. Therefore, future research could expand the amount and variety of data, add other criteria such as technical competency, soft skills, interview results, and psychological aspects, and conduct comparisons with other decision support methods to improve the accuracy and validity of selection results..

AUTHOR CONTRIBUTIONS

Muidin S: Conceptualization, Data Curation, Methodology, Validation, Writing – Original Draft Preparation; Dwi Septia: Project Administration, Writing – Review & Editing;

CONFLICT OF INTEREST

The authors declares that there is no conflict of interest between the authors or with research object in this paper.

ACKNOWLEDGEMENT

Acknowledgement is only addressed to funders or donors and object of research. Acknowledgement can also be expressed to those who helped carry out the research.

REFERENCES

[1] S. Ardi, D. Cahyono, and Y. Kristyawan, “Comparative Analysis of Saw and AHP Methods in The Decision Support System for The Selection of The Best Employee at The Teacher Professional Education Agency, State University of Surabaya,” *J. Indones. Sos. Teknol.*, vol. 6, no. 2 SE-Articles, pp. 783–802, Feb. 2025, doi: 10.59141/jist.v6i2.8928.

[2] S. I. M. Istini, Ahmad Apandi, and Rama Dian Syah, “COMPARATIVE STUDY OF MULTI CRITERIA DECISION MAKING METHODS IN A CASE STUDY OF THE BEST EMPLOYEE DECISION SUPPORT SYSTEMS,” *Int. J. Sci. Technol.*, vol. 3, no. 2 SE-Articles, pp. 71–76, Jul. 2024, doi: 10.56127/ijst.v3i2.1581.

[3] R. R. Oprasto, J. Wang, A. F. O. Pasaribu, S. Setiawansyah, R. Aryanti, and S. Sumanto, “An Entropy-Assisted COBRA Framework to Support Complex Bounded Rationality in Employee Recruitment,” *Bull. Comput. Sci. Res.*, vol. 5, no. 3 SE-, pp. 207–218, Apr. 2025, doi: 10.47065/bulletincsr.v5i3.505.

[4] S. J. Briscilla and R. Sundarajan, “A Multi-Criteria Decision Making for Employee Selection Using SAW and Profile Matching,” *J. Adv. Comput. Intell. Intell. Informatics*, vol. 28, no. 5, pp. 1117–1125, 2024, doi: 10.20965/jaciii.2024.p1117.

[5] S. Kong, S. Chhun, V. Seng, and K. Tieng, “Strategic Framework for Human Resource Management in Logistics Companies: Case Studies and Best Practices,” in *2025 IEEE Technology & Engineering Management Conference - Asia Pacific (TEMSCON-ASPAC)*, 2025, pp. 1–8. doi: 10.1109/TEMSCON-ASPAC65329.2025.11512222.

- [6] M. Andrejić and V. Pajić, "Optimizing Personnel Selection in Transportation: An Application of the BWM-CoCoSo Decision-Support Model," *J. Organ. Technol. Entrep.*, vol. 1, no. 1, pp. 35–46, 2023, doi: 10.56578/jote010103.
- [7] E. Albayrak and Y. C. Erensal, "Using analytic hierarchy process (AHP) to improve human performance: An application of multiple criteria decision making problem," *J. Intell. Manuf.*, vol. 15, no. 4, pp. 491–503, 2004, doi: 10.1023/B:JIMS.0000034112.00652.4c.
- [8] D. Wahyu Wibowo, A. Retno Tri Hariati Ririd, and A. Septian Jaya, "Implementation of Profile Matching and Linear Interpolation Methods for Web-Based Employee Selection System of PT Berdikari Meubel Nusantara," *J. Inform. Polinema*, vol. 10, no. 2, pp. 171–180, 2024, doi: 10.33795/jip.v10i2.5001.
- [9] Sunarti, R. Y. Rangga, and Y. N. Marlim, "Application Profile Matching Method for Employees Online Recruitment," in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2017, p. 12035. doi: 10.1088/1755-1315/97/1/012035.
- [10] T. N. Sari, R. Astriratma, and S. Mulyana, "Group Decision Support System (GDSS) Model on Software Engineer Selection : Integration of AHP , SAW , TOPSIS , and BORDA," no. 1, pp. 186–203, 2025, doi: 10.26798/jiko.v9i1.1495.
- [11] T. U. Lusianti, A. R. E. Najaf, and S. F. A. Wati, "Implementation of a Decision Support System for Selecting the Best Employees Using the AHP-SAW Method," *bit-Tech (Binary Digit. - Technol.)*, vol. 8, no. 2, pp. 1223–1233, 2025, doi: 10.32877/bt.v8i2.2770.
- [12] A. Halimi and E. Ayday, "Profile Matching Across Online Social Networks BT - Information and Communications Security," W. Meng, D. Gollmann, C. D. Jensen, and J. Zhou, Eds., Cham: Springer International Publishing, 2020, pp. 54–70.
- [13] D. S. Rahajeng and I. H. Al Amin, "Decision Support for New Employee Admissions With Profile Matching And ELECTRE Methods," *Sci. J. Informatics*, vol. 8, no. 1, pp. 24–32, 2021, doi: 10.15294/sji.v8i1.27767.
- [14] N. L. W. Sri Rahayu Ginantra, G. W. Bhawika, A. Zamsuri, F. Budianto, and G. S. Achmad Daengs, "Decision Support System in Recommending Climbing Tourism Destinations with Profile Matching Method," *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 835, no. 1, p. 12054, 2020, doi: 10.1088/1757-899X/835/1/012054.
- [15] B. Irwansyah, H. Harmayani, and D. Apdilah, "Profile Matching Method In Improving Staff Performance In Asahan University," *J. Comput. Networks, Archit. High Perform. Comput.*, vol. 7, no. 1 SE-Articles, pp. 341–352, Feb. 2025, doi: 10.47709/cnahpc.v7i1.5463.
- [16] E. Darmawan, F. Yusuf, E. Suseno, H. Budianto, and S. Maesyaroh, "Decision support system for the selection of exemplary teachers using profile matching method," *J. Phys. Conf. Ser.*, vol. 1933, no. 1, p. 12013, 2021, doi: 10.1088/1742-6596/1933/1/012013.
- [17] L. Sopianti and N. Bahtiar, "Students Major Determination Decision Support Systems using Profile Matching Method with SMS Gateway Implementation," *J. SAINS DAN Mat. Vol. 23 Issue 1 Year 2015*, Jan. 2015, [Online]. Available: <https://ejournal.undip.ac.id/index.php/sm/article/view/9135>
- [18] I. Ikmah and C. A. T. Kurniawan, "The Profile Matching Method for a Decision Support System in Teacher Performance Evaluation at SMAN 1 Depok," *J. Sist. Telekomun. Elektron. Sist. Kontrol Power Sist. dan Komputer; Vol 5 No 1 JTECS Januari 2025DO - 10.32503/jtecs.v5i1.6708*, Feb. 2025, [Online]. Available: <https://ejournal.uniska-kediri.ac.id/index.php/JTECS/article/view/6708>
- [19] F. Handayani and N. M. Tarigan, "Decision Support System for The Acceptance of Medical Staff Using the Profile Matching Method at Mitra Sejati Hospital," *DITech Digit. Inf. Technol. J.*, vol. 1, no. 1, pp. 1–12, 2024, doi: 10.63703/ditech.v1i1.3.
- [20] D. Alamsyah, H. Rifaldi, H. Rusdianto, and Y. Daniarti, "Sistem Pendukung Keputusan Seleksi Karyawan Tetap Menggunakan Metode AHP dan Profile Matching," *J. Tek.*, vol. 15, no. 1, pp. 85–96, 2026, doi: 10.31000/jt.v15i1.15813.
- [21] E. T. B. Bangun, R. Wardoyo, Y. I. Sulistya, B. A. Putra, and F. Azim, "Decision Support System for New Employee Recruitment Using Profile Matching and Preference Ranking Organization Method for Enrichment Evaluation (PROMETHEE) Method," *JRST (Jurnal Ris. Sains dan Teknol.)*, vol. 9, no. 2 SE-Research in Computer Science and Informatics Engineering, pp. 149–163, Sep. 2025, doi: 10.30595/jrst.v9i2.23640.