International Journal of Social Science, Educational, Economics, Agriculture Research and Technology (IJSET) | ISSN (e) : 2827-766X
Volumes 4 No. 11 (2025)

MONITORING DASHBOARD USING LINEAR REGRESSION FOR EMPLOYEE PERFORMANCE

Muhammad Oktoda Noorrohman[1]*, Mochammad Ilham Aziz[2], Saifulloh Azhar[3]. Satria Pradana Rizki Yulianto[4], Widodo[5], Devi Ratnasari [6], Fatika La Viola Ifanka [7], Melvien Zainul Asyiqien[8].
Institut Teknologi Al Mahrusiyah, Kota Kediri
E-mail: moktodan01@gmail.com[1]*, mochammadilhamaziz@itama.ac.id[2] , azharnian@gmail.com[3] , satria@itama.ac.id[4] , widodoido7@gmail.com[5] , deviratna1202@gmail.com[6] , fatikalaviolaifanka@gmail.com[7] , melvien@itama.ac.id[8].

Received	: 17 July 2025	Published	: 07 September 2025
Revised	: 28 July 2025	DOI	: https://doi.org/10.54443/ijset.v4i11.1101
Accepted	: 23 August 2025	Link Publish	: https://www.ijset.org/index.php/ijset/index

Abstract

Company management needs to continuously monitor and measure the performance of its employees to ensure the achievement of the goals that have been set. The performance monitoring process requires data and information obtained from 35 employees. The problem is in the process of the employee payroll system, attendance, leave and the main thing is data management for monitoring employees still use conventional method by manual. The results of performance monitoring will then be conveyed to interested parties, efficiently and effectively. After that, the existing data were analyzed using SPSS which stands for Statistical Product and Service Solution. Validity testing can also be done using SPSS and produces a validity test of the data, which is < 0.05 so it is valid. The reliability test of the data is > 0.70, 0.751 for employee salaries and 0.757 for employee performance so it is reliable. The normality test of the data are > 0.05, 0.077 for employee salaries and 0.059 for employee performance so that the data is normally distributed. The linearity test of the data is 0.604 > 0.05, it can be concluded that there is a linear relationship between salary and employee performance. Regression analysis test simple linear data from the data, namely the significance level of 0.001 < 0.05 then the regression model can be used to predict the participation variable or in other words there is an effect of the salary variable on the performance variable.

Keywords: ***dashboard, employee performance monitoring, intelligent business, linear regression, SPSS***

INTRODUCTION

The company studied by the author is an industry engaged in outsourcing. The company has employees spread across many industries. In this industry, the Human Resource Development (HRD) division keeps employee information recorded using a number processing application such as spread read. Information on the number of employees continues to increase along with the development of the industry so that there are perceived obstacles when it is mandatory to seek information or increase information for new employees, which is slow in opening employee information files. Employee attendance at PR Tunas Mandiri was tried conventionally by recording arrivals for one month on paper after which the signatures of the managers of each division were included [1]. Each employee sends an attendance document that has been signed by the manager to HRD via email or submits it in person. However, it is often difficult for HRD staff to verify attendance sent by employees. Not only that, when the employee income calculation process will take quite a long time because the HRD staff performs attendance verification first and then performs a revenue calculation based on attendance and also available deductions, HRD staff performs income calculations with a formatted word processing application [1]. Therefore, companies need to integrate strategic planning and resource allocation and improve management effectiveness. As well as carrying out the process of monitoring and measuring employee performance continuously to ensure that the business processes it carries out can achieve the set goals, through appropriate management strategies [2]. Employee performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him [3]. The monitoring process really requires a data on the results of employee performance monitoring. From this data, it will be processed and made into a report for the executive in the form of a dashboard to present information that is concise and easy to understand. Measurement of organizational conditions

requires data and information from all parts which are the result of the Business Intelligence (BI) process which will be used as the basis for decision making. Management and presentation of information is not an easy thing, given the complexity and amount of information owned by the organization [4]. Organizations need a tool to manage information and present it in an efficient and effective form. In today's modern business practices, companies are assisted by business intelligence (BI) software [4]. This software combines the ability to collect data, analyze it, and generate reports. One of the new BI tools that is popular among information technology staff lately is the dashboard [5]. Dashboard is a tool to visually display and present information from the BI process, namely providing an interface with various forms such as diagrams, reports, visual indicators, alert mechanisms, combined with dynamic and relevant information [2]. Business Intelligence or abbreviated as BI is one form of implementation that is able to answer the needs of the organization to improve its ability to analyze the problems it faces and make decisions [6]. BI has been widely used by organizations in managing data and information to support decision making. In summary, BI can be interpreted as knowledge obtained from the results of data analysis obtained from the activities of an organization. In determining a decision, the manager of this agency looks at the information that has been processed using business intelligence techniques which are implemented into a monitoring dashboard, so that information can be examined and analyzed quickly and easily understood.

LITERATURE REVIEW

Research on employee performance monitoring has been extensively studied in the context of human resource management and information technology. According to Kawiana [3], employee performance is the result of work in terms of quality and quantity in accordance with the responsibilities assigned, thus requiring continuous monitoring to support company strategy. The main challenge in traditional practices is the limitation of manual methods in managing attendance, salary, and personal information data [1]. To overcome this, the application of Business Intelligence (BI) is considered effective because it is capable of integrating data collection, analysis, and presentation in a form of information that is easily understood by managers [4]. One of the most widely used BI implementations is the dashboard, an interactive visualization tool that presents performance indicators in a concise and real-time manner [5]. Previous studies have also shown that dashboards can improve the efficiency of managerial decision-making and support organizational strategies [2]; [22]. In addition, simple linear regression is used to analyze the relationship between variables, for example between salary compensation and employee performance, which has been proven to have a significant effect [12]; [13]. Therefore, the development of a dashboard based on linear regression analysis is a strategic solution that not only facilitates monitoring but also strengthens the data-based decision-making process in employee performance management.

METHOD

Type of

Research This research belongs to the type of quantitative research, while the approach used is prescriptive. Prescriptive is a type of business analysis that helps companies and organizations make informed decisions by analyzing raw data. In other words, it analyzes the data and provides instant suggestions for the best course of action to take in a given scenario [7]. Departing from a theory, the ideas of experts, or the understanding of researchers based on their experiences, then developed into problems that are proposed to obtain justification (verification) in the form of empirical data support in the field. This form of quantitative research the author uses because it is to find out how the performance appraisal and monitoring of employees in PR. Independent Shoots.

Research Instruments

The sampling method used in this study is the Slovin method [8]. A formula for calculating the minimum number of samples if the behavior of a population is not known with certainty [9]. So it is necessary to carry out several stages of the main activity, the first stage is observation (observation), conducting a direct review of the object of research. Study the problems that exist in the field. In connection with the title of the research, namely the design of the monitoring dashboard using linear regression on employee performance. Then the second stage is interviews (interviews) and distributing questionnaires, obtaining accurate data needed for research through direct interviews with appropriate and reliable sources in accordance with the fields to be applied in this research. The third stage is the library study (literature review), looking for materials and references that support the definition of the problem, by understanding and reading and studying books or by visiting trusted internet sites that have a relationship and similar to this research.

Analysis

The data analysis method in this research is assisted by using SPSS version 25 software which will be used as a statistical test tool. SPSS stands for Statistical Product and Service Solution [10]. SPSS can read various types of data or enter data directly into the Data editor. Validity testing can be done using the SPSS application. Validity test is a test that can be used to measure the effectiveness of a measuring instrument or measuring medium to obtain data. Usually used to measure how effective a questionnaire is for obtaining data, more precisely for the questions asked in the questionnaire [11].

The table below explains the variables entered, in this case the salary variable as an independent variable and performance and motivation as dependent variables.

Tabel 1. Variabel

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Motivasi, Kinerja[b]	.	Enter

a. Dependent Variable: Gaji

b. All requested variables entered.

The operational definition of this study is that salary is an amount of money given to employees every month to meet their needs for the work that has been done. The opinion of Maryadi that salary is one of the compensations given to employees to fulfill their needs and can be used as motivation so that employees can have good performance in their work [12]. Hasibuan states that salary is a service fee that is paid periodically to permanent employees and has a definite guarantee [13].

The data management method

The data management method in this study is based on employee motivation, salary income, and performance, through the following data management stages:

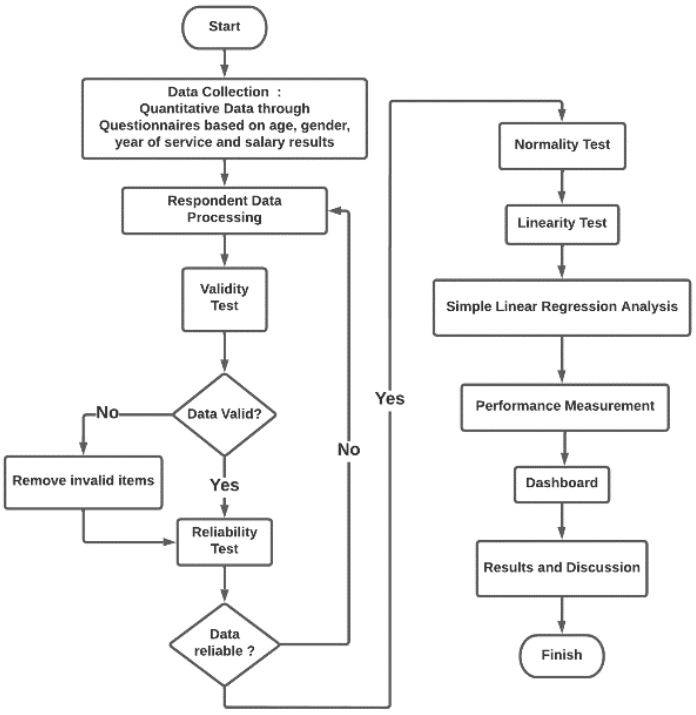

Figure 1. Data management stages

The research began with the collection of quantitative data based on age, gender, length of service, and salary. This was followed by validity and reliability testing. Data that was found to be valid and reliable was then

tested for normality to determine the normality of the data being tested. Next, performance analysis was carried out using the linear regression method to test the effect of one independent variable on the dependent variable with the first simple linear regression test requirement being valid and reliable, and the second being normal and linear. Then, performance calculations were carried out using MAPE, MAD, and MSE, which were used to forecast the performance results of each employee, and the results were then displayed on the dashboard.

RESULTS AND DISCUSSION

Validity

Test validity test is used to measure whether or not an instrument is valid. valid instruments have high validity. The instrument is said to be valid if it is able to measure what is desired, is able to express data from the variables studied appropriately, the level of the instrument shows the extent to which the data collected does not deviate from the description of the variable in question [12]. In fact, Rusydi's opinion is that the instrument or measuring instrument is related to the validity of the research. A measuring instrument is said to be valid or has a high validity value if the measuring instrument can indeed measure what is being measured [14]. There are also other criteria that must be met in the validity test according to plants, namely if the significance value is <0.05, it can be stated that the instrument used is valid. then if the significance value is > 0.05, it can be stated that the instrument used is invalid [15]. The results of the analysis of the validity test of the SPSS version 25 program are shown in table 2 which shows the results of the validity test on the employee salary variable while in table 3 shows the results of the validity test on the employee performance variable from the results of the validity test of the two data variables said to be valid because the significance value < 0, 05. The results of the validity analysis were distributed to 35 respondents.

Table 1. The correctness of the employees' salaries.

Correlations

		VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007	VAR00008	Total
VAR00001	Pearson Correlation	1	.598**	.494**	-.082	.292	.173	.480**	.450**	.684**
	Sig. (2-tailed)		.000	.003	.639	.088	.321	.004	.007	.000
	N	35	35	35	35	35	35	35	35	35
VAR00002	Pearson Correlation	.598**	1	.473**	-.078	.433**	.068	.195	.494**	.677**
	Sig. (2-tailed)	.000		.004	.655	.009	.699	.262	.003	.000
	N	35	35	35	35	35	35	35	35	35
VAR00003	Pearson Correlation	.494**	.473**	1	.166	.533**	.184	.434**	.567**	.795**
	Sig. (2-tailed)	.003	.004		.339	.001	.290	.009	.000	.000
	N	35	35	35	35	35	35	35	35	35
VAR00004	Pearson Correlation	-.082	-.078	.166	1	.156	.198	.162	.320	.377*
	Sig. (2-tailed)	.639	.655	.339		.370	.254	.351	.061	.026
	N	35	35	35	35	35	35	35	35	35
VAR00005	Pearson Correlation	.292	.433**	.533**	.156	1	.282	.013	.342*	.624**
	Sig. (2-tailed)	.088	.009	.001	.370		.101	.939	.044	.000
	N	35	35	35	35	35	35	35	35	35
VAR00006	Pearson Correlation	.173	.068	.184	.198	.282	1	.140	-.031	.341*
	Sig. (2-tailed)	.321	.699	.290	.254	.101		.421	.861	.045
	N	35	35	35	35	35	35	35	35	35
VAR00007	Pearson Correlation	.480**	.195	.434**	.162	.013	.140	1	.499**	.564**
	Sig. (2-tailed)	.004	.262	.009	.351	.939	.421		.002	.000
	N	35	35	35	35	35	35	35	35	35
VAR00008	Pearson Correlation	.450**	.494**	.567**	.320	.342*	-.031	.499**	1	.798**
	Sig. (2-tailed)	.007	.003	.000	.061	.044	.861	.002		.000
	N	35	35	35	35	35	35	35	35	35
Total	Pearson Correlation	.684**	.677**	.795**	.377*	.624**	.341*	.564**	.798**	1
	Sig. (2-tailed)	.000	.000	.000	.026	.000	.045	.000	.000	
	N	35	35	35	35	35	35	35	35	35

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2. The effectiveness of the work of the employees

Correlations

		VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007	VAR00008	Total
VAR00001	Pearson Correlation	1	.375*	.425*	.400*	.566**	.149	.561**	.454**	.687**
	Sig. (2-tailed)		.026	.011	.017	.000	.393	.000	.006	.000
	N	35	35	35	35	35	35	35	35	35
VAR00002	Pearson Correlation	.375*	1	.590**	.243	.679**	.214	.246	.440**	.682**
	Sig. (2-tailed)	.026		.000	.160	.000	.218	.154	.008	.000
	N	35	35	35	35	35	35	35	35	35
VAR00003	Pearson Correlation	.425*	.590**	1	.374*	.456**	.200	.404*	.499**	.696**
	Sig. (2-tailed)	.011	.000		.027	.006	.250	.016	.002	.000
	N	35	35	35	35	35	35	35	35	35
VAR00004	Pearson Correlation	.400*	.243	.374*	1	.248	.299	.420*	.516**	.679**
	Sig. (2-tailed)	.017	.160	.027		.151	.081	.012	.002	.000
	N	35	35	35	35	35	35	35	35	35
VAR00005	Pearson Correlation	.566**	.679**	.456**	.248	1	.164	.378*	.486**	.709**
	Sig. (2-tailed)	.000	.000	.006	.151		.348	.025	.003	.000
	N	35	35	35	35	35	35	35	35	35
VAR00006	Pearson Correlation	.149	.214	.200	.299	.164	1	.111	.294	.543**
	Sig. (2-tailed)	.393	.218	.250	.081	.348		.526	.086	.001
	N	35	35	35	35	35	35	35	35	35
VAR00007	Pearson Correlation	.561**	.246	.404*	.420*	.378*	.111	1	.525**	.639**
	Sig. (2-tailed)	.000	.154	.016	.012	.025	.526		.001	.000
	N	35	35	35	35	35	35	35	35	35
VAR00008	Pearson Correlation	.454**	.440**	.499**	.516**	.486**	.294	.525**	1	.747**
	Sig. (2-tailed)	.006	.008	.002	.002	.003	.086	.001		.000
	N	35	35	35	35	35	35	35	35	35
Total	Pearson Correlation	.687**	.682**	.696**	.679**	.709**	.543**	.639**	.747**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001	.000	.000	
	N	35	35	35	35	35	35	35	35	35

Table 4. The objective of this study is to assess the validity of the employees' motivation.

Correlations

		VAR00001	VAR00002	VAR00003	VAR00004	VAR00005	VAR00006	VAR00007	VAR00008	Total
VAR00001	Pearson Correlation	1	.375*	.425*	.400*	.566**	.132	.557**	.454**	.685**
	Sig. (2-tailed)		.026	.011	.017	.000	.450	.001	.006	.000
	N	35	35	35	35	35	35	35	35	35
VAR00002	Pearson Correlation	.375*	1	.590**	.243	.679**	.177	.242	.440**	.677**
	Sig. (2-tailed)	.026		.000	.160	.000	.310	.162	.008	.000
	N	35	35	35	35	35	35	35	35	35
VAR00003	Pearson Correlation	.425*	.590**	1	.374*	.456**	.153	.399*	.499**	.687**
	Sig. (2-tailed)	.011	.000		.027	.006	.380	.018	.002	.000
	N	35	35	35	35	35	35	35	35	35
VAR00004	Pearson Correlation	.400*	.243	.374*	1	.248	.297	.440**	.516**	.687**
	Sig. (2-tailed)	.017	.160	.027		.151	.083	.008	.002	.000
	N	35	35	35	35	35	35	35	35	35
VAR00005	Pearson Correlation	.566**	.679**	.456**	.248	1	.133	.386*	.486**	.707**
	Sig. (2-tailed)	.000	.000	.006	.151		.446	.022	.003	.000
	N	35	35	35	35	35	35	35	35	35
VAR00006	Pearson Correlation	.132	.177	.153	.297	.133	1	.107	.234	.520**
	Sig. (2-tailed)	.450	.310	.380	.083	.446		.541	.176	.001
	N	35	35	35	35	35	35	35	35	35
VAR00007	Pearson Correlation	.557**	.242	.399*	.440**	.386*	.107	1	.515**	.642**
	Sig. (2-tailed)	.001	.162	.018	.008	.022	.541		.002	.000
	N	35	35	35	35	35	35	35	35	35
VAR00008	Pearson Correlation	.454**	.440**	.499**	.516**	.486**	.234	.515**	1	.733**
	Sig. (2-tailed)	.006	.008	.002	.002	.003	.176	.002		.000
	N	35	35	35	35	35	35	35	35	35
Total	Pearson Correlation	.685**	.677**	.687**	.687**	.707**	.520**	.642**	.733**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.001	.000	.000	
	N	35	35	35	35	35	35	35	35	35

Reliability

Reliability testing is a method used to assess the reliability of a measurement instrument. The objective of this testing is to determine the extent to which the instrument can be trusted. The methodology employed in the analysis of reliability is the Alpha-Cronbach method [14]. The value of Alpha-Cronbach (r alpha) in SPSS is indicative of the magnitude of the alpha value (α) [12]. The term "reliability" is used to denote the stability or consistency of the scores (i.e., measurement scale). The reliability of the test is determined using Cronbach's alpha. According to the established criteria, a Cronbach's alpha value greater than 0.7 is indicative of reliable measurement [15]. The results of the reliability testing conducted in this study are presented in tables 5, 6, and 7.

Table 5. Results Reliability of Employee Salary

Reliability Statistics

Cronbach's Alpha	N of Items
.751	9

Table 3. Employee Performance Reliability Test Results

Reliability Statistics

Cronbach's Alpha	N of Items
.751	9

Table 4. Employee Motivation Reliability Test Results

Reliability Statistics

Cronbach's Alpha	N of Items
.755	9

Based on the reliability test results in Tables 5 and 6, it can be seen that Cronbach's Alpha value is 0.751, while in Table 7, Cronbach's Alpha value is 0.755, indicating that all variables are reliable because the data has a Cronbach Alpha value > 0.70.

Normality

Test Normality test is a test carried out with the aim of assessing the distribution of data in a group of data or variables whether the distribution of the data is normally distributed or not [16]. According to sofyan the basis for decision making is as follows if Asymp. Sig.(2-tailed) > 0.05 then the data is normally distributed. then if Asymp. Sig.(2-tailed) < 0.05 then the data is not normally distributed. In this study, the normality test used was the Shapiro Wilk test using a significance level of 0.05. In 2 seminar papers conducted by Shapiro, Wilk in 1958 and Shapiro, Wilk, Chen 1968, data simulations of no more than 50 samples were used, so it is recommended to use the Shapiro Wilk test for data samples of less than 50 samples (N<50) [17]. Based on the data regarding the normality test results in table 6, it shows that the significance value is > 0.05, then the research data is normally distributed.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Gaji	.140	35	.082	.945	35	.077
Kinerja	.135	35	.109	.941	35	.059
Motivasi	.144	35	.063	.948	35	.096

a. Lilliefors Significance Correction

Linearity

Test Linearity test can be used to determine whether the dependent variable and the independent variable have a linear relationship or not significantly. Linearity test can be done through a test of linearity. The criterion that applies is that if the significance value of linearity is 0.05, it can be interpreted that between the independent variable and the dependent variable there is a linear relationship [18]. Based on the results of the linearity test in table 7, it is

known that the sig value. deviation from linearity is 0.604 > 0.005, it can be concluded that there is a linear relationship between employee salary satisfaction and employee performance.

Simple Linear Regression Analysis

Tabel 1. Test Results Linearitas

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Gaji * Kinerja	Between Groups	(Combined)	430.593	12	35.883	1.662	.145
		Linearity	2.437	1	2.437	.113	.740
		Deviation from Linearity	428.156	11	38.923	1.803	.115
	Within Groups		474.950	22	21.589		
	Total		905.543	34			

Simple Linear Regression is an equation model that describes the relationship of one independent variable/ predictor (X) with one dependent variable/ response (Y). The simple linear regression equation is mathematically expressed as follows [19] :

$$\hat{Y} = a + bX$$

yang mana:

$\hat{Y}$: regression line/ *response variable*
a : constant (*intercept*)
b : regression constant (*slope*)
X : independent variable/ *predictor*

The magnitude of constant a and b can be determined using equation [19]:

$$a = \frac{(\sum Y_i)(\sum X_i^2) - (\sum X_i)(\sum X_i Y_i)}{n\sum X_i^2 - (\sum x_i)^2}$$

$$b = \frac{n(\sum X_i Y_i) - (\sum X_i)(\sum Y_i)}{n\sum X_i^2 - (\sum x_i)^2}$$

where n = number of data

The purpose of simple linear regression analysis is used to test the effect of one independent variable on the dependent variable with the first simple linear regression test being valid and reliable then the second normal and linear [20].

Tabel 2. Simple Linear Regression Result

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	17.321	4.873		3.554	.001
	Kinerja	.627	.256	.542	2.446	.020
	Motivasi	.010	.181	.012	.054	.957

From the output it is known that the value of F count = 6.956 with a significance level of 0.003 <0.05, so the regression model can be used to predict the participation variable or in other words there is an influence of the Salary variable on the Performance and motivation variables. It is known that the constant value (a) is 17.321, while the performance and motivation values (b / regression coefficient) are 0.627 and 0.010, so the regression equation can be written:

$$Y = a + bX + cY$$
$$Y = 17{,}321 + 0{,}627X$$

The equation can be translated:

The constant is 17.321, meaning that the consistent value of the Performance variable is 17.321. The regression coefficient X of 0.627 states that every 1% increase in salary value, the performance value increases by 0.627. The regression coefficient is positive, so it can be said that the direction of the influence of variable X on Y is positive. Based on the t value: it is known that the tcount value is 3.554> t table of 2.035 so it can be concluded that the Salary variable (x) has an effect on the Performance variable (y).

$$t_{tabel} = \left(\frac{a}{2} : n-k-1\right)$$
$$= \left(\frac{0{,}05}{2} : 35-1-1\right)$$
$$= (0{,}025 : 33)$$
$$= 2{,}035$$

Error Measurement Evaluation Prediction Method

Mean Squared Error (MSE)

The calculated Mean Squared Error (MSE) is the average of the squared differences between the predicted value and the duration of employee performance. Each error or residual is squared, then summed and divided by the number of reporting periods using the following equation [21].

$$MSE = \frac{\sum e_i^2}{n} = \frac{\sum (X_i - F_i)^2}{n}$$

Mean Absolute Error (MAD)

The Mean Absolute Error (MAD) calculated is averaging the forecasting error which aims to determine the forecasting error in the same unit of measure as the original. The average of the absolute value of the difference between the predicted value and the duration of employee performance using the following equation [21].

$$MAD = \frac{\sum |x_i - F_i|}{N}$$

Mean Absolute Percentage Error (MAPE)

Mean Absolute Percentage Error (MAPE) will show how much the forecasting error is compared to the actual value of the series. calculated by finding the absolute error in each period, then dividing it by the observed value in that period, and finally averaging the absolute percentage using the following equation [21].

$$\boldsymbol{MAPE = \frac{\Sigma \frac{|e_i|}{X_i} \times 100\%}{n} = \frac{\sum \frac{|X_i - F_i|}{X_i} \times 100\%}{n}}$$

The level of accuracy is calculated using the prediction error measurement. The results show the calculation of employee performance results each week produces the most accurate value with prediction errors for performance MAD 3.5, MSE 13.5 and MAPE 8.6. then for Motivation obtained MAD 2.67, MSE 13.61 and MAPE 6.65 and the last for salary gets MAD 3.33, MSE 13.07 and MAPE 8.51 as shown in table 11 below.

Table 5. Performance Measurement

Ukuran Ketepatan	Kinerja	Motivasi	Gaji
MAD	3,5	2,67%	3,33%
MSE	13,5	13,61%	13,07%
MAPE	8,6	6,65%	8,51%

Dashboard Monitoring Employee Performance

Dashboard design involves designing the interface that will be generated in the employee performance monitoring dashboard visualization. Based on the identification of existing indicators and user information needs, the dashboard interface design can be tailored to user requirements [22]. This Employee Performance Monitoring dashboard generates employee performance monitoring graphs based on several monthly reports, an employee status report showing that 86% of employees are still active and 14% are

inactive, a report on the number of employees by gender showing that 60% of employees are female and 40% are male, and a report on employee length of service by age showing that the average employee aged 22 has been working for 1 year, the average employee aged 28 has been working for 2 years, an average of 34-year-old employees having worked for 3 years, an average of 35-year-old employees having worked for 4 years, and an average of 38-year-old employees having worked for 5 years, and employee performance reports showing an overall average score of 35 out of 40, it can be concluded that several employees are already working optimally. The graph below provides information and reports on employee performance and provides information on employee data based on status and length of service within the specified time frame.

Figure 1. *Employee performance monitoring dashboard*

CONCLUSION

Based on the results of the study, it can be concluded that the dashboard used is very effective in helping monitor employee performance. It can be seen from the results obtained that using the validity test, reliability test, normality test, linearity test and simple linear regression analysis test are described as follows:

- The validity test of the data is < 0.05 so it is declared valid.
- The reliability test of the data is > 0 .70, 0.751 for employee salaries and 0.757 for employee performance so that it is declared reliable.
- The normality test of the data is > 0.05, 0.077 for employee salaries and 0.059 for employee performance so that the data is normally distributed.
- The linearity test of the data is 0.604 > 0, 05 it can be concluded that there is a linear relationship between salary and employee performance.
- Simple linear regression analysis test of the data, namely the significance level of 0.001 < 0.05, then the regression model can be used to predict the participation variable or in other words there is an effect of the salary variable on the variable. Performance.

The advantage of this product is that it allows easy Employee performance effectively and efficiently with the use of a more modern system. In the future, it is hoped that this product can be developed even better and minimize any deficiencies.

REFERENCES

A. P. Utomo, N. Mariana, dan R. S. A. Rejeki, "RANCANGAN DASHBOARD KINERJA LAYANAN PASIEN RUMAH SAKIT," Dinamik, vol. 22, no. 2, hal. 57–66, Jul 2017, doi: 10.35315/dinamik.v22i2.7107.

A. R. Barlan, M. Laekkeng, dan R. Sari, "Pengaruh Sanksi Perpajakan, Tingkat Pendapatan, Dan Pengetahuan Pajak Terhadap Kepatuhan Wajib Pajak Kendaraan Bermotor Di Kantor Samsat Kabupaten Polewali Mandar," J. Ekon. dan Bisnis Islam, vol. 6, no. 2, 2021.

A. Rusydi dan M. Fadhli, Statistika Pendidikan: Teori dan Praktik Dalam Pendidikan. 2018.

Aziz I., A. Z. Fanani, and A. Affandy, "Analisis Metode Ensemble Pada Klasifikasi Penyakit Jantung Berbasis Decision Tree," J. Media Inform. Budidarma, vol. 7, no. 1, pp. 1–12,2023, doi: 10.30865/mib.v7i1.5169.

D. Lestari, "Perancangan Sistem Informasi Penggajian Karyawan Pada PR. Tunas Mandiri Kabupaten Pacitan," Peranc. Sist. Inf. Penggajian Karyawan Pada PR. Tunas Mandiri Kabupaten Pacitan, vol. 3, no. 4, 2014.

dursun delen Sharda, Ramesh, "Ramesh Sharda, Dursun Delen, Efraim Turban - Business Intelligence, Analytics, and Data Science_ A Managerial Perspective-Pearson (2017).pdf." hal. 515, 2018.

E. Turban, R. Sharda, dan J. Aronson, "Business intelligence: a managerial approach," Tamu-Commerce.Edu, 2008.

I. G. P. Kawiana, Manajemen Sumber Daya Manusia, "MSDM" Perusahaan, vol. 4, no. 3. 2020.

I. M. Yuliara, "Modul Regresi Linier Sederhana," Univ. Udayana, 2016.

I. Nazaruddin dan E. Fatmaningrum, "Analisis Statistik Dengan SPSS," Anal. Stat. Ekon. dan Bisnis Dengan SPSS, hal. 100–105, 2021.

Imelda, "Businnes Intelligence," Bisnis Intell., vol. 11, no. Bisnis Intellijen, hal. 111–122, 2008, [Daring]. Tersedia pada: https://jurnal.unikom.ac.id/jurnal/business-intelligence.3c/09-miu-11-1-imelda.pdf.

L. P. Handho dan S. D. Purnamasari, "Dasboard Monitoring Mahasiswa Dan Lulusan Untuk Meningkatkan Potensi Penerimaan Mahasiswa Baru Serta Strategi Pemasaran," J. Comput. Inf. Syst. Ampera, vol. 1, no. 2, 2020, doi: 10.51519/journalcisa.v1i2.37.

M. A. Oktaviani dan H. B. Notobroto, "Perbandingan Tingkat Konsistensi Normalitas Distribusi Metode Kolmogorov-Smirnov, Lilliefors, Shapiro-Wilk, dan Skewness-Kurtosis," J. Biometrika dan Kependud., vol. 3, no. 2, 2014.

M. S. P. Hasibuan, "Manajemen Sumber Daya Manusia," Ed. Revisi Jakarta Bumi Aksara, 2011.

Maryadi, "PENGARUH GAJI, BONUS, DAN FASILITAS TERHADAP MOTIVASI KERJA KARYAWAN PADA PT. BANK SULSELBAR KANTOR PUSAT MAKASSAR," Gema Kampus IISIP YAPIS Biak, vol. 11, no. 1, hal. 11–21, Apr 2016, doi: 10.52049/gemakampus.v11i1.13.

N. M. Janna, "Konsep Uji Validitas dan Reliabilitas dengan Menggunakan SPSS," Artik. Sekol. Tinggi Agama Islam Darul Dakwah Wal-Irsyad Kota Makassar, no. 18210047, hal. 1–13, 2020.

N. Yannuansa, M. Safa'udin, and M. I. Aziz, "Pemanfaatan Algoritma K-Means Clustering dalam Mengolah Pengaruh Hasil Belajar Terhadap Pendapatan Orang Tua Pada Mata Pelajaran Produktif," J. Tecnoscienza, vol. 6, no. 1, pp. 43–55, 2021, doi:10.51158/tecnoscienza.v6i1.530.

R. Nurcahyo, A. Z. Fanani, A. Affandy, and M. I. Aziz, "Peningkatan Algoritma C4. 5 Berbasis PSO Pada Penyakit Kanker Payudara," J. Media Inform. Budidarma, vol. 7, no.4, pp. 1758–1765, 2023, doi: 10.30865/mib.v7i4.6841.

R. Tanamal, "What is the most influential factor on decisions using youtube as a tool to support buy or sell means? (Case study surabaya city and surrounding area)," J. Theor. Appl. Inf. Technol., vol. 97, no. 20, 2019.

Robbins, "Perilaku Organisasi: Konsep, Kontroversi dan Aplikasi. Jiilid 1," in Jakarta: Prenhallindo. Stephen,L., 2007.

S. Few, "Information Dashboard Design," Eff. Vis. Commun. data Sebastopol, 2006, Diakses: Des 21, 2010. [Daring]. Tersedia pada: http://www.mendeley.com/research/information-dashboard-design/.

S. Siregar, Statistika Terapan Untuk Perguruan Tinggi: Edisi Pertama. 2017.

Sugiyono dan A. Susanto, "Cara Mudah Belajar SPSS dan LISREL: Teori dan Aplikasi untuk Analisis Data Penelitian," in Cara Mudah Belajar SPSS dan LISREL: Teori dan Aplikasi untuk Analisis Data Penelitian, 2015.

W. V. Sujarweni dan L. R. Utami, "The Master Book of SPSS," Anak Hebat Indones., vol. 03, no. 2016, 2019