

Decision Support System for Determining Student Eligibility for the University Admission

Invitation Path at SMK Negeri 1 Jetis Mojokerto

Dhony Manggala Putra, S.E., M.M. as Supervisor

Vemas Rachmadani Shofiyulloh

Informatics Engineering Study Program

Department of Information Technology

ABSTRACT

This study aims to develop a web-based Decision Support System (DSS) for determining student eligibility for the university admission invitation pathway at SMK Negeri 1 Jetis Mojokerto using the Analytic Hierarchy Process (AHP) method. The development of this system is motivated by the manual process of determining eligible students, which is time-consuming and prone to subjectivity in decision-making. The proposed system is designed to assist Guidance and Counseling (BK) teachers in determining eligible students objectively based on predefined assessment criteria. The AHP method is applied to determine the priority weight of each criterion through pairwise comparisons, matrix normalization, eigenvalue calculation, and consistency ratio testing. The assessment criteria include students' report card grades from semesters one to five, attendance records, and non-academic achievements. The system is implemented as a web-based application that enables users to manage student data, assessment criteria, weighting processes, and automatically generate student rankings based on the final preference scores. The results of this study indicate that the developed system is capable of supporting the student eligibility determination process in a more effective, efficient, objective, and transparent manner.

Keywords: *Decision Support System, Analytic Hierarchy Process (AHP).*

