

ABSTRACT

**IMPLEMENTATION OF DECISION TREE C4.5 ALGORITHM FOR THE
ACCEPTANCE OF KIP SCHOLARSHIPS FOR NEW STUDENTS BASED
ON WEBSITE**

By

Yessindah Citra Raya

yesindahcitraraya25@gmail.com

The development of Information Technology (IT) has opened up new opportunities for improving the quality of education, especially in access to higher education. However, financial constraints remain a challenge for many highly potential students. The KIP Scholarship Program offers a solution, but the selection process still faces manual constraints that are time-consuming and tend to be subjective. The Decision Tree C4.5 algorithms in this research was implemented to classify potential scholarship recipients based on objectively and efficiently established criteria. This algorithm provides the ability to make decisions based on available data, such as average exam scores, achievements, and other economic factors. The system development method used was the waterfall method, through five stages: communication, planning, modeling, construction, and system delivery. This research produces a Scholarship Acceptance System Based on Website that used the Decision Tree C4.5 algorithms for the selection of KIP Scholarship recipients for new students, enhancing efficiency, objectivity, and quality of the scholarship selection process. This research achieves results that show that the implementation of the Decision Tree C4.5 algorithms effectively improved the smoothness of the selection process and enhances the quality of scholarship acceptance determination. Thus, supporting the development of a more efficient and targeted scholarship selection system.

Keywords : Information Technology, KIP Scholarship, Decision Tree C4.5 Algorithm, Scholarship Acceptance Selection.



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