

ABSTRACT

ANALYSIS FOR FIELDS OF SPECIALIZATION SELECTION USING CLASSIFICATION METHOD WITH ARTIFICIAL NEURAL NETWORK ALGORITHM (CASE STUDY: BACHELOR OF INFORMATION SYSTEM TELKOM UNIVERSITY)

By

SYARAH NUR LATIFAH

1202150249

Information System program at Telkom University provides seven fields of specialization that joined into groups of expertise to support the focus of scientific field for its students. Due to the lack of gathered information about student's ability as a relevant consideration for selecting bachelor specialization, students are often faced with problems where they have difficulty to determine the field of specialization that suits their potential. In the end they choose specialization without seeing their competencies or just follow recommendations from their friends without seeing their academic abilities.

Therefore, an analysis for predicting student's specialization using Artificial Neural Network algorithm is proposed to provide information about classification for the student based on their competence. The main purpose of this study is to analyze the result of predicting student's specialization using the classification method with Artificial Neural Network algorithm. The advantages of Artificial Neural Network are its adaptability, nonlinearity, modularity, and openness to noisy, fuzzy, or soft data. In this case, the classification process is carried out using attributes, such as: Student ID, the average scores of supporting subjects for first option of specialization, first option of specialization, the average scores of supporting subjects for second option of specialization, second option of specialization and specialization that chosen by students. The result shows that accuracy using this process is around 94,81%. Thus, it could bring impacts and beneficial to students, educators, and institutions.

Keyword: *students' specialization, classification, Artificial Neural Network.*