

**ANALYSIS OF STUDENTS SATISFACTION TOWARDS OFFLINE
LEARNING PERFORMANCE USING C4.5 ALGORITHM IN
DEPARTMENT OF INFORMATICS AT UNIVERSITAS
MUHAMMADIYAH KALIMANTAN TIMUR**

THESIS

Submitted in partial fulfillment of the requirements for achieving a
Bachelor of Computer Science

SUBMITTED BY:

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**DEPARTMENT OF INFORMATICS
FACULTY OF SCIENCE AND TECHNOLOGY
UNIVERSITAS MUHAMMADIYAH KALIMANTAN TIMUR
SAMARINDA
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APPROVAL SHEET

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MUHAMMADIYAH KALIMANTAN TIMUR**

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1. This paper is completely ORIGINAL and has NEVER been submitted for a Bachelor's Degree in Informatics, either at the Universitas Muhammadiyah Kalimantan Timur (UMKT) or at any other tertiary institution.
2. This paper is MY idea, formulation and, research, without any help from other parties except the direction of the Advisory Lecturer
3. In this paper there are no works or opinions of others, except in writing that is clearly stated as a reference in the manuscript by mentioning the name of the author and mentioned in the Bibliography of this paper.
4. The software used in this research is entirely my responsibility, not the responsibility of the Universitas Muhammadiyah Kalimantan Timur (UMKT)
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Samarinda, 20 June 2022,

That state,



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FOREWORD

Alhamdulillah, by giving thanks to Allah SWT, because of His guidance this thesis with the title "ANALYSIS OF STUDENTS SATISFACTION TOWARDS OFFLINE LEARNING PERFORMANCE USING C4.5 ALGORITHM IN DEPARTMENT OF INFORMATICS AT UNIVERSITAS MUHAMMADIYAH KALIMANTAN TIMUR" can be completed on time, as one of the requirements to complete lecture assignments and to achieve the graduation requirements of the Universitas Muhammadiyah Kalimantan Timur, Samarinda.

The writer is very aware of all the shortcomings in writing this thesis, but with the moral and material assistance from various parties, all the completeness in writing it can be fulfilled. On this occasion, the author should express his gratitude and highest appreciation to various parties who directly or indirectly have provided assistance.

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5. My beloved parents and siblings who always give love, prayers, advice, and for their extraordinary patience in dealing with every step of the

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Samarinda, 20 Juni 2022

Writer

ABSTRACT

The quality of human resources is closely related to the quality of the education, because education is an important role for the development and progress of the nation. Educational institutions should be able to guarantee the student satisfaction. Students will perceive quality of service from educational institution, students will feel dissatisfied if the quality of service does not match student expectations. Dissatisfied students will show an uncomfortable learning behavior, such as not having the learning enthusiasm. Determine the level of student satisfaction using the decision tree C4.5 algorithm. According to Taufiq and Yudihartanti, C4.5 algorithm has the advantage that able to process numeric and discrete data, can handle missing attribute values, produce rules that easy to interpret. Through the calculation of the C4.5 algorithm, it produces a decision tree with 7 rules of 5 satisfying decisions and 2 dissatisfied decisions. The Emp3 attribute is the most influential aspect of Department of Informatics students satisfaction at Universitas Muhammadiyah Kalimantan Timur. Accuracy of the C4.5 model used in this research is 88,89%.

Keywords: Students satisfaction, C4.5 algorithm, decision tree.

ABSTRAK

Kualitas sumber daya manusia erat kaitannya dengan kualitas pendidikan, karena pendidikan memegang peranan penting bagi pembangunan dan kemajuan bangsa. Lembaga pendidikan harus mampu menjamin kepuasan siswa. Mahasiswa akan mempersepsikan kualitas pelayanan dari lembaga pendidikan, mahasiswa akan merasa tidak puas jika kualitas pelayanan tidak sesuai dengan harapan mahasiswa. Siswa yang tidak puas akan menunjukkan perilaku belajar yang tidak nyaman, seperti tidak memiliki semangat belajar. Menentukan tingkat kepuasan siswa menggunakan algoritma pohon keputusan C4.5. Menurut Taufiq dan Yudihartanti, algoritma C4.5 memiliki keunggulan yaitu mampu mengolah data numerik dan diskrit, dapat menangani nilai atribut yang hilang, menghasilkan aturan yang mudah diinterpretasikan. Melalui perhitungan algoritma C4.5 menghasilkan sebuah pohon keputusan dengan 7 aturan, 5 keputusan memuaskan dan 2 keputusan tidak puas. Atribut Emp3 merupakan aspek yang paling berpengaruh terhadap kepuasan mahasiswa Jurusan Teknik Informatika di Universitas Muhammadiyah Kalimantan Timur. Akurasi model C4.5 yang digunakan dalam penelitian ini adalah 88,89%.

Kata Kunci: Kepuasan mahasiswa, algoritma C4.5, pohon keputusan.

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