

ABSTRAK

IMPLEMENTASI *ASSOCIATION RULE* DENGAN ALGORITMA *APRIORI* PADA DATA PEMINJAMAN BUKU UPT PERPUSTAKAAN UNIVERSITAS LAMPUNG MENGGUNAKAN METODOLOGI CRISP-DM

BY

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UPT Perpustakaan Universitas Lampung merupakan UPT yang bergerak di bidang perpustakaan. Memiliki dua layanan berdasarkan interaksinya yaitu layanan teknis dan layanan pengguna. Saat ini UPT Perpustakaan Universitas Lampung memiliki buku yang tercetak sebanyak 142.776. Penelitian ini bertujuan menemukan pola *association rule* dengan teknik data mining memanfaatkan software RapidMiner 9.1 dalam penerapan algoritma Apriori. Metode penelitian *Cross Industry Standar Process for Data Mining* (CRISP-DM) dengan tahapan *business understanding phase*, *data understanding phase*, *data preparation*, *modelling phase*, *evaluation phase* dan *deployment phase*. Data yang digunakan dalam penelitian ini adalah data transaksi peminjaman buku dari tahun 2014 hingga 2017 dengan total data peminjaman buku sebanyak 170.115. Hasil pemodelan *association rule* dengan algoritma apriori menggunakan nilai *support* 0.3 dan nilai *confidence* 0.3 diperoleh judul buku “Metodologi pengajaran bahasa” akan meminjam “English for tourism :panduan berprofesi di dunia pariwisata” nilai *support* 1 dan *confidence* 1. Rekomendasi untuk pembelian buku disarankan mengikutipattern hasil *association rule*.

Kata kunci:UPT Perpustakaan Universitas Lampung, Data Peminjaman Buku, Data Mining, Association Rule, CRISP-DM.

ABSTRACT

IMPLEMENTATION OF ASSOCIATION RULE WITH APRIORI ALGORITHM ON THE BORROWED BOOK DATA AT CENTER LIBRARY OF UNIVERSITY OF LAMPUNG USING THE CRISP-DM METHODOLOGY

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Center Library of University of Lampung has two services based on their interactions; they are technical service and user service. Today, Library Center of University of Lampung has 142,776 printed books. This study aims to find the association rule pattern with data mining techniques utilizing the RapidMiner 9.1 software in the implementation of the Apriori algorithm. Cross Industry Standard Process for Data Mining (CRISP-DM) research methods with the business-understanding phase, the understanding phase, the data preparation phase, the modeling phase, the evaluation phase and the deployment phase. The used data in this study is book lending transaction data from 2014 to 2017 with a total book lending data of 170,115. The results of association rule modeling with The Apriori Algorithm using the value of support 0.3 and confidence value of 0.3 obtained the title of the book "Language Teaching Methodology" will borrow "English for tourism: a guide to professionalism in the world of tourism" value of support 1 and confidence 1. Recommendation for purchasing books is advised to follow the pattern of the results of the association rule.

Keywords: Center Library of University of Lampung, Data Book Lending, Data Mining, Association Rule, CRISP-DM.