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**PENERAPAN ALGORITMA LOGISTIC REGRESSION UNTUK
MEMPREDIKSI CUSTOMER CHURN PADA LAYANAN WIFI IDPLAY,**

dibawah bimbingan Taryadi, M.Cs. dan Eny Jumiati, M. Kom.

47 + x halaman / 16 gambar / 4 tabel / 14 lampiran / 24 pustaka (2020-2025)

ABSTRAK

Persaingan yang semakin ketat pada industri layanan internet broadband meningkatkan risiko customer churn, termasuk pada layanan WiFi IdPlay. Customer churn merupakan kondisi ketika pelanggan berhenti berlangganan atau berpindah ke penyedia layanan lain, yang berdampak pada penurunan pendapatan dan loyalitas pelanggan. Penelitian ini bertujuan untuk menerapkan algoritma Logistic Regression dalam memprediksi customer churn serta mengidentifikasi variabel yang berpengaruh terhadap churn pada layanan WiFi IdPlay. Metode penelitian menggunakan pendekatan kuantitatif dengan kerangka kerja Cross Industry Standard Process for Data Mining (CRISP-DM). Dataset yang digunakan terdiri dari 275 data pelanggan dengan variabel independen meliputi harga layanan, bandwidth, tenure, keterlambatan pembayaran, rata-rata penggunaan data, frekuensi penggunaan, dan jumlah komplain, serta variabel dependen berupa status pelanggan. Hasil penelitian menunjukkan bahwa model Logistic Regression menghasilkan akurasi sebesar 81,16% dan recall sebesar 88,89%, yang mengindikasikan kemampuan model yang baik dalam mendeteksi pelanggan berpotensi churn. Variabel tenure, jumlah komplain, dan keterlambatan pembayaran merupakan faktor yang paling berpengaruh terhadap terjadinya churn. Penelitian ini diharapkan dapat menjadi dasar bagi perusahaan dalam menyusun strategi retensi pelanggan yang lebih efektif dan berbasis data. Penelitian selanjutnya disarankan untuk menggunakan jumlah data yang lebih besar dan membandingkan metode klasifikasi serta menambahkan variabel lain yang relevan guna meningkatkan performa dan akurasi model prediksi.

Kata kunci: *Customer Churn, Logistic Regression, CRISP-DM, Layanan Internet, WiFi IdPlay*

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**APPLICATION OF THE LOGISTIC REGRESSION ALGORITHM TO
PREDICT CUSTOMER CHURN IN WIFI IDPLAY SERVICES,**

under the supervision of Taryadi, M.Cs. and Eny Jumiati, M.Kom.

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ABSTRACT

Increasing competition in the broadband internet service industry has heightened the risk of customer churn, including in the WiFi IdPlay service. Customer churn refers to the condition in which customers discontinue their subscriptions or switch to other service providers, resulting in decreased revenue and customer loyalty. This study aims to apply the Logistic Regression algorithm to predict customer churn and to identify the variables that influence churn in the WiFi IdPlay service. The research employs a quantitative approach using the Cross Industry Standard Process for Data Mining (CRISP-DM) framework. The dataset consists of 275 customer records with independent variables including service price, bandwidth, tenure, payment delays, average data usage, usage frequency, and number of complaints, while the dependent variable is customer status. The results show that the Logistic Regression model achieves an accuracy of 81.16% and a recall of 88.89%, indicating strong performance in identifying customers with a high potential for churn. Tenure, number of complaints, and payment delays are identified as the most influential factors affecting customer churn. This study is expected to provide a data-driven foundation for companies in developing more effective customer retention strategies. Future research is recommended to use larger datasets, compare different classification methods, and incorporate additional relevant variables to improve the performance and accuracy of the predictive model.

Keywords: *Customer Churn, Logistic Regression, CRISP-DM, Internet Services, WiFi IdPlay*