

ABSTRAK

ANALISIS KINERJA ALGORITMA CART (*CLASSIFICATION AND REGRESSION TREES*) PADA SISTEM REKOMENDASI ALAT KONTRASEPSI BAGI PASANGAN USIA SUBUR (PUS)

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Penelitian ini mengkaji Indonesia sebagai negara berkembang di Asia Tenggara dengan pertumbuhan penduduk yang pesat. Kepala BPS dan Sekjen Kemendagri merilis hasil SP2020 pada September 2020, mengindikasikan jumlah penduduk mencapai 270,20 juta jiwa. Pemerintah merespons dengan program BKKBN (Badan Koordinasi Keluarga Berencana Nasional) yaitu KB (Keluarga Berencana) untuk mengatur pertumbuhan penduduk. Namun, banyak pasangan usia subur yang tidak mengerti alat kontrasepsi yang cocok. Penelitian ini mengusulkan solusi berupa analisis data pemakai alat kontrasepsi menggunakan teknologi machine learning dengan algoritma CART (*Classification and Regression Trees*). Tujuan utamanya adalah merekomendasikan alat kontrasepsi yang sesuai. Model rekomendasi dengan akurasi terbaik (91,39%) menggunakan criterion gini, pembagian data 67:33, dan kedalaman maksimum 5.

Kata Kunci : CART, Alat Kontrasepsi, KB, Criterion

ABSTRACT
PERFORMANCE ANALYSIS OF CART ALGORITHM
(CLASSIFICATION AND REGRESSION TREES) ON
CONTRACEPTIVE RECOMMENDATION SYSTEMS FOR
COUPLE OF REPRODUCTIVE AGE

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This study delves into Indonesia as a developing country in Southeast Asia with a rapid population growth rate. The Head of BPS and the Secretary-General of the Ministry of Home Affairs released the results of SP2020 in September 2020, indicating that the population had reached 270.20 million. In response, the government initiated the BKKBN program, focusing on family planning (KB) to manage population growth. However, many couples of reproductive age lack awareness regarding suitable contraceptive methods. This research proposes a solution involving the analysis of contraceptive usage data using machine learning technology, employing the CART algorithm. The primary aim is to provide recommendations for appropriate contraceptive methods. The best-performing recommendation model, with an accuracy of 91.39%, utilizes the Gini criterion, a data split of 67:33, and a maximum depth of 5 for the decision tree.

Keywords : CART, Contraception, KB, Criterion