

PERBANDINGAN ALGORITMA *K-NEAREST NEIGHBORS* DAN *NAÏVE BAYES* DALAM PENENTUAN PENERIMA BANTUAN SOSIAL DI DESA BANYUPUTIH KIDUL LUMAJANG

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ABSTRAK

Bantuan sosial PKH merupakan bantuan sosial dari pemerintah bagi masyarakat yang termasuk dalam kriteria tidak mampu. Namun bantuan sosial ini sering kali disalah salurkan. Maka dari itu dibutuhkan sistem rekomendasi penerima bantuan sosial PKH menggunakan algoritma klasifikasi seperti *K-Nearest Neighbors* dan *Naïve Bayes* agar penyaluran bantuan merata secara objektif. Penelitian ini bertujuan untuk mengklasifikasi penerima bantuan sosial yang layak mendapatkan bantuan sosial PKH dan yang tidak layak menggunakan algoritma *K-Nearest Neighbors* (KNN) dan *Naïve Bayes* di Desa Banyuputih Kidul, Kabupaten Lumajang. Model dari kedua algoritma tersebut diuji menggunakan *confusion matrix* dengan parameter seperti akurasi, presisi, *recall* dan *f1-score*. Hasil penelitian ini menunjukkan bahwa performa algoritma KNN memiliki kinerja yang lebih baik dibandingkan *Naïve Bayes* dalam menentukan penerima bantuan sosial PKH berdasarkan nilai evaluasi yang diperoleh KNN yaitu akurasi dengan nilai 99% sedangkan *Naïve Bayes* dengan hasil evaluasi 86%. Penelitian ini diharapkan dapat menjadi dasar pengembangan sistem pendukung keputusan yang objektif berdasarkan data untuk membantu pemerintah desa dalam menyalurkan bantuan sosial PKH agar lebih tepat sasaran.

Kata Kunci : PKH, Klasifikasi, Sistem Pendukung Keputusan, K-Nearest Neighbors, Naïve Bayes.

**COMPARISON OF K-NEAREST NEIGHBORS AND NAÏVE BAYES
ALGORITHM IN DETERMINING SOCIAL ASSISTANCE RECIPIENTS IN
BANYUPUTIH KIDUL VILLAGE LUMAJANG**

Thoriq Wahyu Hidayatullah. 2026. Comparison of k-nearest neighbors and naïve bayes algorithm in determining social assistance recipients in banyuputih kidul village lumajang . Universitas Muhammadiyah Jember.

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ABSTRACT

Program Keluarga Harapan social assistance is a social assistance from the government for people who are included in the criteria of being underprivileged. However, this social assistance is often misdistributed. Therefore, a recommendation system for PKH social assistance recipients is needed using classification algorithms such as K-Nearest Neighbors and Naïve Bayes so that the distribution of assistance is evenly distributed objectively. This study aims to classify social assistance recipients who are eligible for PKH social assistance using the K-Nearest Neighbors (KNN) and Naïve Bayes algorithms in determining the eligibility of social assistance recipients in Banyuputih Kidul Village, Lumajang Regency. The models of both algorithms were tested using a confusion matrix with parameters such as accuracy, precision, recall and f1-score. The results also show that the performance of the KNN algorithm has a better performance than Naïve Bayes in determining PKH social assistance recipients based on the evaluation value obtained by KNN, which is 99% while Naïve Bayes with an evaluation result of 86%. This research is expected to be the basis for the development of an objective decision support system based on data to assist village governments in distributing PKH social assistance to be more targeted.

Keywords: Social Assistance, Classification, Decision Support System, K-Nearest Neighbors, Naïve Bayes.