

ABSTRAK

Program Keluarga Harapan merupakan salah satu upaya pemerintah untuk mengurangi kemiskinan melalui bantuan bersyarat. Namun, implementasi Program Keluarga Harapan di beberapa daerah, seperti di Desa Cangkring, Kecamatan Bluluk, Kabupaten Lamongan, masih menghadapi kendala, terutama dalam hal seleksi penerima bantuan yang sering kali tidak tepat sasaran, sehingga tidak semua keluarga yang membutuhkan bantuan mendapatkannya. Penelitian ini bertujuan untuk mengklasifikasikan penerima bantuan Program Keluarga Harapan di Desa Cangkring menggunakan metode *Support Vector Machine* dengan *Adaptive Boosting* untuk membantu perangkat desa dalam pengambilan keputusan. Dataset bersumber dari Desa Cangkring Kecamatan Bluluk Kabupaten Lamongan yang berjumlah 755 data, dengan 276 menerima dan yang tidak menerima sebanyak 479. Fitur yang digunakan meliputi jumlah anggota keluarga, pendapatan perbulan, pengeluaran perbulan, luas aset tanah, luas rumah, keluarga pra Sejahtera, tanggungan Pendidikan, tanggungan ibu hamil, tanggungan disabilitas. Pada penelitian ini, hasil implementasi *Support Vector Machine* dengan *Adaptive Boosting* memberikan performa yang lebih baik. Hal ini ditunjukkan melalui hasil evaluasi. Dimana *Support Vector Machine* dengan *Adaptive Boosting* dengan *Kernel Linear* dan $C = 1000$ menghasilkan nilai evaluasi terbaik dengan nilai *Accuracy* sebesar 92,56%. Selain itu, diperoleh nilai *Precision* sebesar 98,59%, *Recall* sebesar 89,74%, dan *F1-Score* sebesar 93,96%.

Kata Kunci : Program Keluarga Harapan, *Classification*, *Support Vector Machine*, *Adaptive Boosting*.

ABSTRACT

The Family Hope Program is one of the government's efforts to reduce poverty through conditional assistance. However, the implementation of the Family Hope Program in several areas, such as in Cangkring Village, Bluluk District, Lamongan Regency, still faces obstacles, especially in terms of selecting aid recipients, which is often not on target, so that not all families who need assistance receive it. This study aims to classify recipients of the Family Hope Program in Cangkring Village using the Support Vector Machine with Adaptive Boosting method to assist village officials in decision-making. The dataset is sourced from Cangkring Village, Bluluk Subdistrict Lamongan District, consisting of 755 data points, with 276 recipients and 479 non-recipients. The features used include the number of family members, monthly income, monthly expenses, land area, house area, pre-prosperous families, educational dependents, pregnant dependents, and disabled dependents. In this study, the implementation of Support Vector Machine with Adaptive Boosting yielded better performance. This is demonstrated through the evaluation results. Where Support Vector Machine with Adaptive Boosting with a Linear Kernel and $C = 1000$ produced the best evaluation value with an Accuracy of 92.56%. In addition, a Precision value of 98.59%, a Recall of 89.74%, and an F1-Score of 93.96% were obtained.

Keyword : *Family Hope Program, Classification, Support Vector Machine, Adaptive Boosting.*