

ABSTRAK

Nama : Ramzi Kamali
NIM : 41518010153
Pembimbing TA : Dr. Rahmat Budiarto, M.Eng
Judul : Perbandingan Algoritma K-NN dan Naïve Bayes untuk Klasifikasi Penerima Bantuan Sosial Covid-19 di Sukabumi Selatan

WHO mendeklarasikan *Covid-19* merupakan pandemi global pada 11 Maret 2020 dan mengakibatkan masyarakat Indonesia mengalami penurunan penghasilan pendapatan rumah tangga selama pandemi berlangsung. Itu sebabnya pemerintah Indonesia mengeluarkan program bantuan sosial (*bansos*) *Covid-19* untuk mengurangi efek maupun dampak dari penurunan ekonomi. Program tersebut langsung ditangani oleh Dinas Sosial (*Dinsos*), Pemerintah Daerah Tingkat II dan jajaran di bawahnya. Pendistribusian bantuan sosial *Covid-19* di Sukabumi Selatan menggunakan data yang diperoleh dari RT/RW namun memiliki keterbatasan dalam hal penilaian kelayakan. Data juga diperoleh melalui data penerima bantuan sosial tetap sebelum adanya *Covid-19*, sehingga menimbulkan ketidaksesuaian akibat menggunakan data yang lama. Oleh karena itu dibutuhkan metode dalam menentukan kelayakan penerima bantuan sosial *Covid-19*. Penelitian ini bertujuan untuk membantu *Dinsos* khususnya di Sukabumi Selatan dalam menentukan penerima bantuan sosial *Covid-19* menggunakan algoritma *K-Nearest Neighbors* dan *Naive Bayes*. Dengan adanya penelitian ini diharapkan dapat membantu *Dinsos* dalam meningkatkan ketepatan pendistribusian bantuan sosial *Covid-19*. Dengan model CRISP-DM dan membandingkan algoritma *K-Nearest Neighbors* dan *Naive Bayes*, terbukti bahwa pengklasifikasi *Naive Bayes* menunjukkan hasil terbaik dengan nilai *accuracy* sebesar 93%, *precision* 100% dan *recall* 85% sedangkan K-NN nilai *accuracy* sebesar 90%, *precision* 98% dan *recall* 85%.

Kata kunci :

Covid-19, Bantuan Sosial, Klasifikasi, K-Nearest Neighbors, Naïve Bayes

ABSTRACT

Name : Ramzi Kamali
Student Number : 41518010153
Counsellor : Dr. Rahmat Budiarto, M.Eng
Title : Comparison of K-NN and Naïve Bayes for
Classification of Social Assistance in South
Sukabumi

Covid-19 was declared as a global pandemic by World Health Organization (WHO) on March 11, 2020 and then impacts the Indonesian people to experience a decrease in household income during the pandemic. The Indonesian government launch the Covid-19 social assistance program to reduce the effects and impacts of the economic downturn. The program is directly coordinated and monitored by the Social Service in each province. The distribution of Covid-19 social assistance in Sukabumi Selatan district uses data obtained from Neighborhood Association/Community Association (RT/RW), however the collected data has limitations in term of feasibility assesment. Data is also gathered through regular social assistance recipients list prior to Covid-19 pandemic, so that there is discrepancy among the data. Therefore, a mechanism is needed to assess the eligibility of recipients of Covid-19 social assistance. This study aims to assist Social Services, especially in Sukabumi Selatan, in assessing the eligibility of recipients of Covid-19 social assistance using the K-Nearest Neighbors and Naïve Bayes algorithms. With this resecearch, it is hoped that it can help Social Services of the district in increasing the distribution of Covid-19 social assistance. Experiments using Cross-Industry Standard Process for Data Mining (CRISP-DM) model and comparing the K-NN and Naïve Bayes algortihms were carried out, and the results show that Naïve Bayes classifier shows the best result with 93% accuracy, 86% precision and 100% recall, while K-NN has 90% accuracy, 82% precision and 98% recall.

Key words:

Covid-19, Social Assistance, Classification, K-Nearest Neighbors, Naïve Bayes