ABSTRACT

*CLUSTER*ING DETERMINATION OF COVID-19 IN INDONESIA USING K-MEANS DAVIES BOULDIN INDEX METHODS

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Covid-19 is a new type of Pneumonia virus that attacks the respiratory system. This virus was first discovered in the Wuhan province of China with fast rapid transmission. The spread of the Covid-19 virus is increasing every day as known by the increasing number of Covid-19 cases that continue to increase every day especially in all provinces in Indonesia. This study aims to conduct *cluster*ing on the spread of Covid-19 in every province in Indonesia, which produces *cluster*s or zones according to their characteristics which will later be used by the government or related agencies to map or supervise areas that are spreading Covid-19. The data used for this study was sourced from the kaggle website using 3 variables, namely: Number of Recoveries, Number of Deaths, and Number of Infected Cases for Covid-19 in Indonesia. This study uses the K-Means method and the Davies Bouldin Index. The results of the calculation of the 3 variables of the Three Variables will be *cluster*ed using the K-Means method and then the results of the *cluster* are calculated using the Davies Bouldin Index to see which *cluster* is at its most optimal based on the Davies Bouldin Index value. This study resulted that the most optimal *cluster*ing value was found in the 6-*cluster* experiment with a Davies Bouldin Index value of 0.158 in which there were 6 groups where the main Java island was in a separate group and outside Java was included in the *Cluster*_3 group.

Keywords: *Cluster*ing , K-Means, Davies Bouldin Index, Covid-19