عنوان مقاله:

Upgrading the Human Development Index (HDI) to control pandemic mortality rates: A data mining approach to COVID-19

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خلاصه مقاله:

In recent years, the occurrence of various pandemics (COVID-19, SARS, etc.) and their widespread impact on human life have led researchers to focus on their pathology and epidemiology components. One of the most significant inconveniences of these epidemics is the human mortality rate, which has highly social adverse effects. This study, in addition to major attributes affecting the COVID-19 mortality rate (Health factors, people-health status, and climate) considers the social and economic components of societies. These components have been extracted from the countries' Human Development Index (HDI) and the effect of the level of social development on the mortality rate has been investigated using ensemble data mining methods. The results indicate that the level of community education has the highest effect on the disease mortality rate. In a way, the extent of its effect is much higher than environmental factors such as air temperature, regional health factors, and community welfare. This factor is probably due to the ability of knowledge-based societies to manage the crises, their attention to health advisories, lower involvement of rumors, and consequently lower incidence of mental health problems. This study shows the impact of education on reducing the severity of the crisis in communities and opens a new window in terms of cultural and social factors in the interpretation of medical data. Furthermore, according to the results and comparing different types of single and ensemble data mining methods, the application of the ensemble method in terms of classification accuracy and prediction error has the best result.

کلمات کلیدی:

Coronavirus Disease (COVID-19), pandemics, Ensemble Data mining methods, HID Index

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