

Spatial Distribution and Time Series Analysis of COVID-19 Pandemic in Italy: A Geospatial Perspective

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Abstract : The novel coronavirus pandemic disease (COVID-19) affected the whole globe, though there is a lack of clinical studies and its epidemiological features. But as per the observation, it has been seen that most of the COVID-19 infected patients show mild to moderate symptoms, and they get better without any medical assistance due to a better immune system to generate antibodies against the novel coronavirus. In this study, the active cases, serious cases, recovered cases, deaths and total confirmed cases had been analyzed using the geospatial inverse distance weightage technique (IDW) within the time span of 2nd March to 3rd June 2020. As of 3rd June, the total number of COVID-19 cases in Italy were 231,238, total deaths 33,310, serious cases 350, recovered cases 158,951, and active cases were 39,177, which has been reported by the Ministry of Health, Italy. March 2nd-June 3rd, 2020 a sum of 231,238 cases has been reported in Italy out of which 38.68% cases reported in the Lombardia region with a death rate of 18%, which is high from its national mortality rate followed by Emilia-Romagna (14.89% deaths), Piemonte (12.68% deaths), and Veneto (10% deaths). As per the total cases in the region, the highest number of recoveries has been observed in Umbria (92.52%), followed by Basilicata (87%), Valle d'Aosta (86.85%), and Trento (84.54%). The COVID-19 evolution in Italy has been particularly found in the major urban area, i.e., Rome, Milan, Naples, Bologna, and Florence. Geospatial technology played a vital role in this pandemic by tracking infected patient, active cases, and recovered cases. Geospatial techniques are very important in terms of monitoring and planning to control the pandemic spread in the country.

Keywords : COVID-19, public health, geospatial analysis, IDW, Italy

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