Project Proposal: Geospatial Analysis of COVID-19 Impact

I. Introduction: The proposed project aims to conduct a comprehensive geospatial analysis of COVID-19 data from 2019, focusing on the interplay between geographic location, temperature, population factors, and the spread of the virus. This analysis will contribute valuable insights into the spatial patterns and determinants of COVID-19 impact globally.

II. Objectives:

1. Explore the correlation between latitude and COVID-19 cases, deaths, and mortality rates.
2. Investigate the influence of temperature on the spread and severity of COVID-19 in different regions.
3. Analyse the relationship between population size and density with the incidence of COVID-19.
4. Examine demographic factors contributing to variations in COVID-19 mortality rates.

III. Methodology:

1. **Data Collection:**
    - Acquire global COVID-19 data from 2019, including confirmed cases, deaths, and mortality rates.
    - Obtain geospatial data for countries, including latitude, temperature, population, and population density.
2. **Data Analysis:**
    - Use GIS tools to map out the distribution of COVID-19 cases, deaths, and mortality rates based on latitude.
    - Conduct spatial analysis to explore temperature variations and their correlation with COVID-19 patterns.
    - Analyse population and population density data to understand their impact on the incidence of COVID-19.
3. **Demographic Analysis:**
    - Explore demographic variables such as age distribution in relation to COVID-19 mortality rates.
    - Consider healthcare infrastructure and access as additional demographic factors.

IV. Expected Outcomes:

1. Identification of spatial patterns in COVID-19 impact based on latitude and temperature.
2. Insights into the influence of population size and density on the spread of the virus.
3. Understanding demographic factors contributing to variations in COVID-19 mortality rates.