**Covid-19 Cases Analysis**

**PROBLEM STATEMENT**

The COVID-19 pandemic, caused by the novel coronavirus SARS-CoV-2, has had a profound global impact since its emergence in late 2019. It has affected individuals, communities, healthcare systems, economies, and daily life in unprecedented ways. To effectively respond to and manage the ongoing crisis, it is crucial to conduct a comprehensive analysis of COVID-19 cases. This analysis aims to provide insights into the patterns, trends, and factors influencing the spread and impact of the virus.

**ANALYSIS OBJECTIVES**

In this phase, we need to clearly define the specific objectives that will guide our analysis of covid-19 cases analysis . Our objectives will encompass several key aspects, including:

* **Epidemiological Analysis:** Understand the geographical distribution of COVID-19 cases, including the regions and countries most affected, and identify hotspots and areas with low infection rates.
* **Temporal Analysis:** Analyze the progression of the pandemic over time, including identifying waves, spikes, and lulls in infection rates, and correlating them with various factors such as public health measures, vaccination campaigns, and mutations of the virus.
* **Demographic Analysis:** Examine the demographic characteristics of COVID-19 cases, including age, gender, and comorbidities, to determine vulnerable populations and potential risk factors
* **Healthcare System Impact:** Assess the strain on healthcare systems, including hospitalization rates, ICU admissions, and ventilator usage, to understand the capacity and preparedness of healthcare facilities..

**DATA COLLECTION**

**Identify Data Sources:**

Utilize official sources such as government health departments, the World Health Organization (WHO), and the Centers for Disease Control and Prevention (CDC).

Consider academic institutions, research organizations, and non-governmental organizations (NGOs) that provide COVID-19 data and research.

**Data Types:**

Collect a wide range of data types, including case counts, hospitalizations, ICU admissions, deaths, recoveries, testing rates, and vaccination data.

Include demographic data (age, gender, ethnicity), geographic information (location, region, country), and temporal data (date and time stamps).

**VISUALIZATION STRATEGY**

Effective visualization of insights is key to making our findings accessible and actionable.

Plan a visualization strategy that leverages IBM Cognos to create informative dashboards, reports, and visual representations of our analysis.

Design visualizations that are intuitive, informative, and capable of conveying complex insights to stakeholders and decision-makers.

**CODE INTEGRATION**

In certain aspects of our analysis, the integration of code can enhance the quality and depth of our findings.

Identify specific areas within the analysis process where code can be used to improve data cleaning, transformation, and statistical analysis.