PROJECT TITLE

Analyzing COVID-19 Cases and Deaths Data using IBM Cognos

TEAM MEMBERS

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PHASE 1

1. Project Definition:

      The objective of this project is to analyze COVID-19 cases and deaths data for countries in the EU/EEA region using IBM Cognos. Specifically, the project aims to compare and contrast the mean values and standard deviations of daily COVID-19 cases and associated deaths. To achieve this, we will define analysis objectives, collect relevant COVID-19 data, design effective visualizations in IBM Cognos, and extract valuable insights from the data.

2. Design Thinking:

2.1 Analysis Objectives:

Before diving into the data analysis, it's crucial to define clear objectives. In this phase, we establish the following analysis objectives that provide a clear direction for our analysis, focusing on central tendencies and variations in COVID-19 data,

- Compare the mean values of daily COVID-19 cases and deaths within the EU/EEA.
- Contrast the standard deviations of daily COVID-19 cases and deaths within the EU/EEA.

2.2 Data Collection:

To proceed with the analysis, we need to gather the necessary data. The provided dataset is accessible via the link:

https://www.kaggle.com/datasets/chakradharmattapalli/covid-19-cases

The dataset contains information on COVID-19 cases and deaths per day and by country within the EU/EEA. We will download and preprocess this dataset to ensure it is ready for analysis in IBM Cognos. Data cleaning and transformation may be required to handle missing values, format inconsistencies, and outliers.

2.3 Visualization Strategy:

Effective data visualization is key to conveying insights. In this phase, we plan how to visualize the mean values and standard deviations of COVID-19 cases and deaths using IBM Cognos. Our visualization strategy includes:

- Selecting appropriate chart types (e.g., line charts, bar charts, box plots) to represent mean and standard deviation data.
- Creating visualizations that allow for easy comparison between countries and trends over time.
- Ensuring visualizations are interactive and can be filtered by date, country, or other relevant factors.
- Adding labels and legends for clarity and context.
- IBM Cognos provides a powerful platform for creating dynamic visualizations that will help stakeholders understand the data and draw meaningful conclusions.

2.4 Insights Generation:

The ultimate goal of this project is to derive insights from the analysis of COVID-19 data. Insights may include:

- Identifying countries with significantly higher or lower mean daily cases and deaths.
- Recognizing trends or patterns in the data, such as seasonal variations.
- Understanding the impact of various interventions or policies on COVID-19 statistics.

- Highlighting countries that exhibit unusual deviations in case and death statistics.

These will be derived through a combination of statistical analysis and visual examination of the data. These insights will provide valuable information for policymakers, healthcare professionals, and the general public.

3. Next Steps:

The next phase of the project will involve data preprocessing, loading the data into IBM Cognos, creating visualizations, and conducting statistical analysis to fulfill the defined objectives. Regular updates and collaboration among team members will be essential throughout the project to ensure its success.

4. Timeline:

A tentative timeline for the project is as follows:

- Data Collection and Preprocessing: 2 weeks
- IBM Cognos Setup and Visualization Design: 3 weeks
- Data Analysis and Insights Generation: 4 weeks
- Documentation and Reporting: 2 weeks
- Review and Finalization: 1 week