**COVID-19 Vaccine Analysis**

**Phase 2**: Innovation

**Problem Title**: Covid-19 Vaccine Analysis

**Problem Statement**: The COVID vaccine analysis project aims to assess vaccine effectiveness, distribution efficiency, and public response, utilizing data-driven methods to enhance our understanding of vaccination outcomes and contribute to public health strategies.

# **INTRODUCTION:**

The development and roll-out of COVID-19 vaccines have been fundamental in saving lives and protecting people from severe disease and death —especially those most at-risk and vulnerable to COVID-19, protecting health systems, and reducing widescale social disruption.

WHO in the Western Pacific continues to work with governments and partners to facilitate equitable access to and distribution of vaccines as quickly as possible.

However, the hard work is not over as COVID-19 remains a public health concern. Having the recommended doses of COVID-19 vaccine remains important, in combination with other measures, for the longer-term and sustained management of COVID-19.

# **PROBLEM SOLVING:**

**Step 1: Data Collection**

Collecting the required data set from the given link for our problem statement.

**Step 2**: **Data Preprocessing**

This step involves cleaning and organizing the raw data,removing the errors and transforming it into a usable format.

**Step 3: Exploratory Data Analysis**

This step involves studying vaccine related data to find patterns or trends.

It helps researchers to understand the vaccine effectiveness.

**Step 4: Statistical Analysis**

This step involves studying the data to determine how well the vaccine prevents illness and reduces the transmission.

**Step 5: Visualization**

This step shows the graphical representation of COVID-19 vaccine analysis.

# **TECHNIQUES USED:**

* Classification
* Regression
* Clustering
* NLP (Natural Language Processing)
* Deep Learning
* Scatter plots, Histogram, Pie chart

# **FLOW CHART:**

Data Collection

Data Preprocessing

Statistical Analysis

Visualization

Exploratory data Analysis