**Problem Statement** : Covid-19 Vaccines Analysis

**Problem Definition** : The problem is to conduct an in-depth analysis of Covid-19 vaccine data, focusing on vaccine efficacy, distribution, and adverse effects. The goal is to provide insights that aid policymakers and health organizations in optimizing vaccine deployment strategies. This project involves data collection, data preprocessing, exploratory data analysis, statistical analysis, and visualization.

My approach for this problem is as follows :

1. Collect the vaccination data from Kaggle and other reputable sources
2. Implement preprocessing methods to clean the data of missing values and converting the data in desired format.
3. Perform Exploratory Data Analysis to understand its characteristics and to identify trends.
4. Perform statistical tests to analyze vaccine efficacy, adverse effects, and distribution across different populations.
5. Create visualizations that enable us to find key insights and information present in the data.
6. Provide actionable insights and recommendations based on the analysis to assist policymakers and health organizations.

The programming language of interest for this problem is python, due to its vast support and libraries that aid the process of Data Science and Machine Learning.

The collection of data about the Vaccination information is primarily gathered from Kaggle and other reputed source such as Our World in Data is also used to study the efficacy of the vaccine and to study its adverse effects.

The goal of this project is to provide Key insights and Recommendations that are gathered from the collected data, which would aid policy makers and Health Organizations to formulate strategies in implementing Vaccine doses to the masses.