**Covid-19 Vaccines Analysis**

Aim:

To conduct an in-depth analysis of Covid-19 vaccine data, including efficacy, distribution, and adverse effects, to provide insights that aid policymakers and health organizations in optimizing vaccine deployment strategies.

Introduction:

The COVID 19 pandemic caused due to the virus named corona. This virus was originated in Wuhan, China in 2019 and was later spread throughout the world. The disease showed symptoms such as mild fever and cold but also caused life threatening symptoms like breathing problems caused by damage to the lungs. As this virus was new to the world and there was no vaccine or cure to it at the earlier period there were several deaths around the world. So the countries around the world announced lockdowns to prevent the spread of the disease. An effort was made by several health organizations to discover the cure or a vaccine to fight against the virus.

In later stages of 2020 several experimental vaccines were developed and was tested to humans. The efforts were successful as the vaccines were helpful in reducing the affects the virus and even if people were infected, they were not in any life threatening situation and escaped the illness having only minor symptoms. Many countries later developed their own vaccines and also helped other countries without the resources by providing them with vaccines developed.

Problem Statement:

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.

Design Thinking:

1. Data Collection:.

The covid-19 vaccination data was collected from a online resource and the collected file was imported to the desktop.

1. Data Preprocessing:

After loading the data and after analyzing the data | understood that there are 86512 rows and 15 columns. And in that some of the columns contained null values I have replaced the null values by 0 with the use of replace functions and started working on the data.

1. Visualization:

In visualization part I have used different kinds of charts, graphs to display the data in the format which will be easy to understand.

