🏥 Machine Learning for H1N1 Vaccine Hesitancy Prediction

Business Problem Despite strong medical evidence supporting vaccines, vaccine hesitancy has incr
outbreaks. Understanding why individuals choose not to get vaccinated is crucial for developing eff

This project aims to predict who is most likely to be hesitant about receiving the H1N1 vaccine and
individuals, public health officials can design targeted strategies to increase vaccine acceptance and

To achieve this, multiple machine learning models were used to classify individuals based on their lik
such as accuracy, precision, recall, ROC curves, and confusion matrices to ensure reliable and actiona

Key Metrics To ensure the model provides reliable and actionable insights, it prioritizes the followin

Accuracy – Measures overall correctness of predictions. Precision – Reduces false positives, ensuring
hesitant individuals who might otherwise be overlooked. F1-Score – Balances precision and recall fo

[1]:
```
# Importing Relevant Libraries
import pandas as pd
import numpy as np

import matplotlib.pyplot as plt
import seaborn as sns


from sklearn.preprocessing import StandardScaler, MinMaxScaler, MaxAbsScaler, OneHotEr
from sklearn.pipeline import Pipeline
```