

## REFLECTION:

By the activity I have chosen the dataset regarding the healthcare I have chosen the survey dataset. First, I started to load the dataset and later I started to do the following given steps. It was very fun to perform all the steps and by getting the error I was try to get help from my team member

**Data Exploration:** The script starts by loading a dataset from a CSV file, and then performs a quick overview of the data, including printing the first few rows, checking the data types and missing values, and generating a statistical step.

**Feature Engineering:** The script identifies the relevant features and the target variable for the problem. It also handles categorical variables by converting them into numeric form using one-hot encoding.

**Data Splitting:** The data is split into training and testing sets, with an 80/20 ratio, to ensure proper model evaluation.

**Model Training and Evaluation:** A Linear Regression model is trained on the training data, and its performance is evaluated on the test data using Mean Squared Error (MSE) and R-squared metrics.

**Visualization:** The script includes two visualizations: a scatter plot of the actual vs. predicted values, and a residual plot to inspect the model's performance. The overall structure of the code follows a typical machine learning workflow, including data loading, preprocessing, model training, and evaluation. The specific problem domain is not clearly defined, but the script appears to be a general template that can be adapted to various binary classification tasks.