DSFT-07 PHASE 2
PROJECT PRESENTATION
PROJECT TITLE:Factors Affecting Suicide Numbers - Regression Analysis

By Group 1

HYPOTHESIS TEST

- Null Hypothesis (H0): There is no significant relationship between Socioeconomic and Health Indicators and the number of suicides.
- Alternative Hypothesis (H1): There is a significant relationship between Socioeconomic and Health Indicators and the number of suicides.

PROJECT OVERVIEW

- Our project focuses on developing a predictive model to estimate suicide numbers based on socio-economic variables, aiming to provide valuable insights for targeted interventions and informed policy decisions.

- By leveraging regression analysis, we seek to uncover patterns and relationships within the data that can contribute to a proactive approach in addressing suicide rates

OBJECTIVES

- The primary objective is to build a robust regression model that accurately predicts suicide numbers, offering a data-driven perspective on the impact of socio-economic factors.
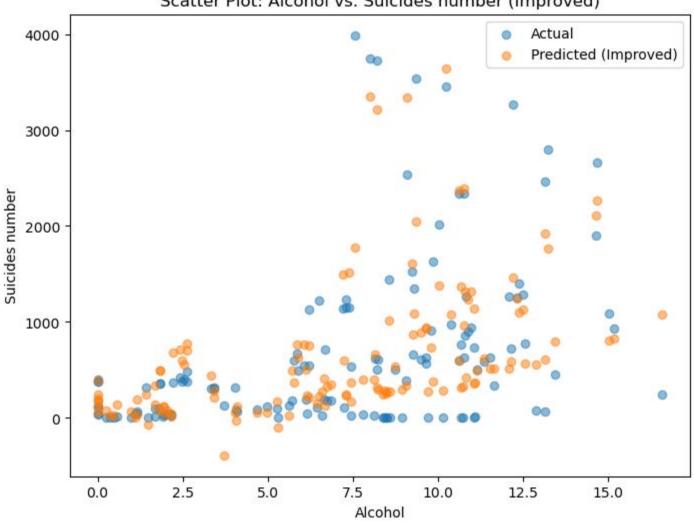
DATA

- Data Source: https://www.kaggle.com

- Variables: Infant deaths, Alcohol, Under-five deaths, Population, Schooling and Suicides number
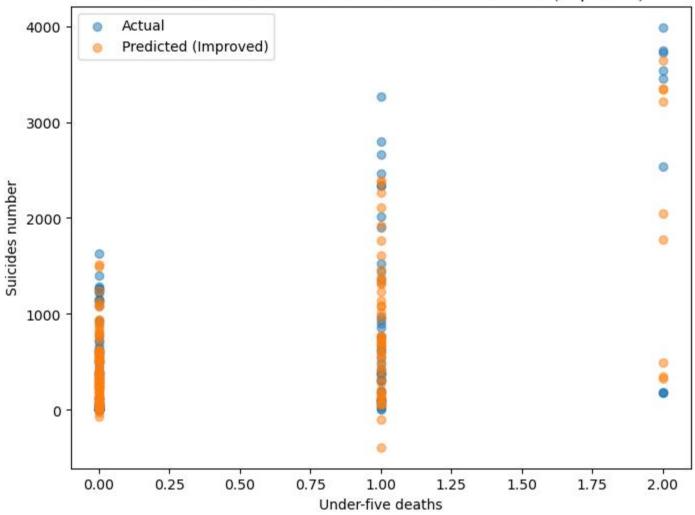
PROCEDURES

- Importing all necessary packages

- Loading the dataset

- Cleaning the data

- Exploratory Data Analysis
- Regression Analysis: utilized both linear and multilple regression analysis models

VISUALIZATIONS OF THE FINDINGS

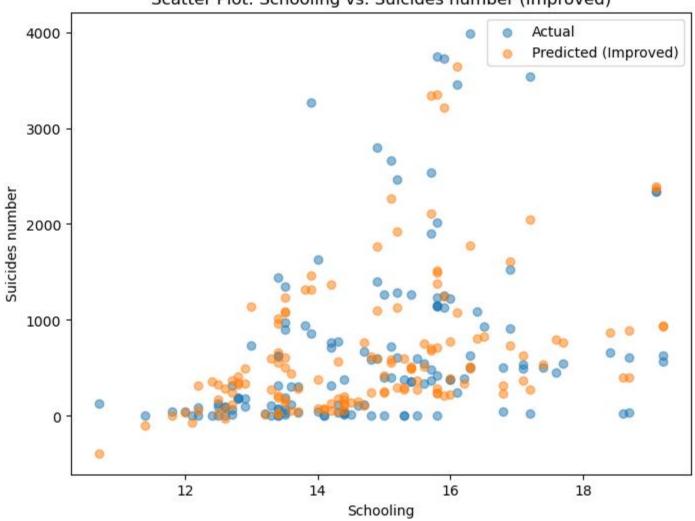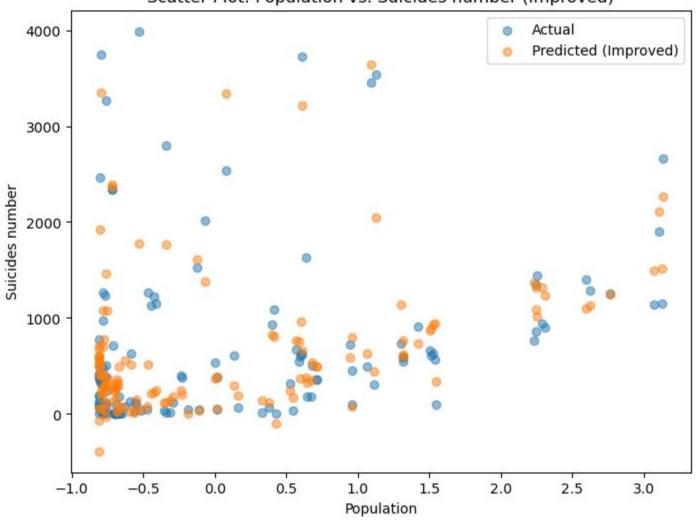Scatter Plot: Alcohol vs. Suicides number (Improved)

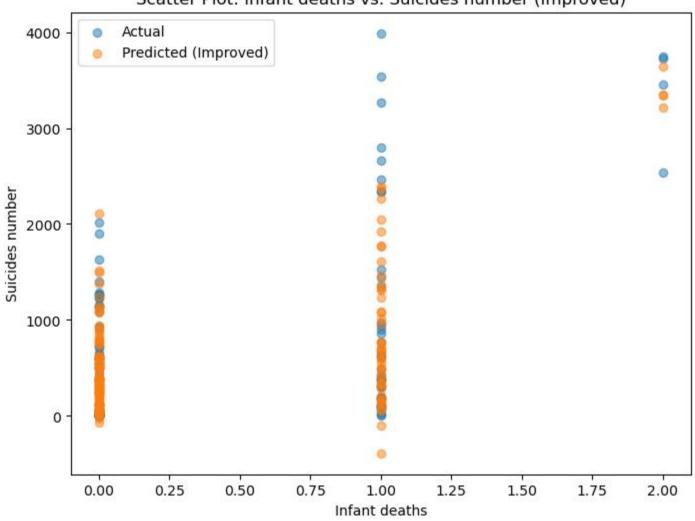Scatter Plot: Under-five deaths vs. Suicides number (Improved)

Scatter Plot: Schooling vs. Suicides number (Improved)

Scatter Plot: Population vs. Suicides number (Improved)

Scatter Plot: Infant deaths vs. Suicides number (Improved)

CONCLUSION

- Based on the low p-values for each variable and the overall model, we reject the null hypothesis.

- There is evidence to suggest that Socioeconomic and Health Indicators (Infant deaths, Alcohol, Under-five deaths, Population, and Schooling) have a significant relationship with the number of suicides.

Recommendations

- Implement targeted mental health awareness programs, particularly in regions where higher 'Infant deaths' and 'Under-five deaths' are observed

- Develop evidence-based policies to address alcohol consumption

- Invest in education and skill development initiatives, leveraging the positive association between 'Schooling' and predicted 'Suicides number

- Implement interventions and support services in areas with higher populations, acknowledging the influence of 'Population' on suicide rates

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to the following individuals who contributed the success of this project:
1. Thorne Makau
2. Collins Cheruiyot
3. Mumbi
4. Peter Mainye
5. Joyce Muthiani
6. Edwin Mwenda